OIL PIPELINE DEREGULATION

HEARING

BEFORE THE

COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION UNITED STATES SENATE

NINETY-SEVENTH CONGRESS

SECOND SESSION

ON

S. 1626

TO AMEND THE DEPARTMENT OF ENERGY ORGANIZATION ACT TO CLARIFY THE JURISDICTION OF THE FEDERAL ENERGY REGULATORY COMMISSION, TO REFORM AND IMPROVE THE REGULATION OF OIL PIPELINES, AND FOR OTHER PURPOSES

SEPTEMBER 29, 1982

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OIL PIPELINE DEREGULATION

WEDNESDAY, SEPTEMBER 29, 1982

U.S. SENATE,
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION,
Washington, D.C.

The committee met, pursuant to notice, at 9:30 a.m., in room 235, Russell Senate Office Building, Hon. Ted Stevens, presiding.

Staff members assigned to this hearing: Cindy Douglass, staff counsel, and Peyton Wynns, minority professional staff member.

OPENING STATEMENT BY SENATOR STEVENS

Senator STEVENS. Good morning. This is the time for the hearings on S. 1626. We had thought to avoid the logjam by starting these hearings early. Unfortunately, we just ran into a greater problem, and we apologize for getting you here earlier than we could commence the hearings.

The oil pipeline regulation and the possibility of deregulation is rapidly becoming a front burner issue in transportation of our Nation's energy resources. The regulatory situation today is clouded. Suspended tariffs, lengthy administrative reviews, litigation, and overall uncertainty have become the rule. In my opinion, we are approaching a critical decisionmaking point that must involve all branches of Government.

Currently, the Federal Energy Regulatory Commission is grappling with two huge tariff cases, the *Williams* case and the trans-Alaska pipeline system tariff determination. The latter case is critical in establishing the economic framework for all of Alaska's future frontier transportation systems. Both cases are of tremendous importance to the pipeline industry in setting the methodology for all future tariffs.

The issue is time. It has been 4 years since the FERC inherited the oil pipeline regulation from the Interstate Commerce Commission. At the time, I spoke against transfer of this ICC function, fearing we would experience substantial delays in obtaining a methodology for tariff valuation from the FERC. The old Federal Power Commission was not knowledgeable in this field. Therefore, it was unreasonable to expect the reconstituted FPC at the FERC to have the necessary expertise to deal with the problem in a timely fashion.

Unfortunately, my worst fears have been realized. We have no FERC decision on methodology, let alone valuation of these tariffs. Moreover, the courts will, in all likelihood, spend many years reviewing decisions once they are made. Meanwhile, literally billions of dollars hang in the balance in escrow accounts. This is hardly a

healthy environment for investment and construction of new pipelines, either in Alaska or the lower 48.

This is why some of us believe congressional action is necessary. Although I generally support the concept of deregulation, I believe there are certain cases where continued regulation is warranted, and TAPS is a primary example of that condition. We just cannot accept the argument that it is possible for the sole means of transportation of Alaska's North Slope crude oil to be left to competition among the eight owners.

There is an alternative to long FERC proceedings, and that is an approved settlement between TAPS and the State of Alaska pending litigation, and there are many cases throughout the continental United States where alternative means of oil transportation are available.

Truck, rail, barge, as well as other pipelines provide an economic option for lower 48 transportation Additionally, lower 48 refineries can often exchange oil with other refineries closer to the point of destination in order to eliminate many transportation costs altogether. Oil exchanges along with the alternate methods of transportation can serve to foster competition, to keep tariff rates down and insure open entry and access to transportation systems.

We believe Congress must step in to assist the executive and judicial branches in establishing a framework for reasonably structuring oil pipeline tariffs. Wherever possible, the free market should be allowed to work in maintaining tariff rates at a fair level and to insure equal access.

In those instances where the market cannot properly influence competitive access and pricing decisions, it is the role of Government to regulate so that we can achieve a reasonable rate of return on investment while insuring fair treatment for both those wishing to transport their product and those who ultimately consume it.

This hearing is another step in the process to compose a law to cope with a situation that has clearly become a problem of enormous dimensions for the energy industry. I commend Senator Nickles on his initiative, and we will work with him to obtain a legislative solution. I thank the witnesses for taking the time today to help us gather the facts needed to construct such a measure.

We have a series of panels. I will ask Senator Cannon, first, if he has an opening statement.

OPENING STATEMENT BY SENATOR CANNON

Senator CANNON. Thank you, Senator Stevens. First, I appreciate your agreeing to chair these hearings. I hope they will help us determine the committee's agenda for next year by establishing whether or not we have a serious problem to which the committee needs to devote its attention.

I must say the issue of oil pipeline deregulation has not been a major issue in the State of Nevada. Indeed, we only have two pipelines: a Southern Pacific line and a Cal-Nev line into Las Vegas.

The jurisdiction over the transportation of oil, whether by rail, barge, or pipeline, is clearly within the realm of this committee. However, since FERC was asked to administer the Interstate Com-

merce Act with respect to pipelines in 1977, we have had relatively little to do with pipelines or FERC.

But I must say that it is an ominous sign whenever a regulated industry yearns for the good old days at the ICC. The ICC regulation of most industries certainly didn't help them. The railroads and the intercity bus industry fought like the devil to get out from under the ICC, and the truckers who were dragged kicking and screaming away from the ICC are beginning to like it out there on their own.

I am very proud of the record of this committee in reducing Government regulation. While others were giving speeches and writing books about less regulation, we were passing legislation to lessen regulation for air cargo carriers, for airlines, for railroads, for broadcasters, for passenger buses, for telecommunications carriers, for trucking companies, and others.

In doing so, I think the Senator from Alaska will agree we have managed to take into account the unique needs of his State. If there is a case to be made for less regulation of oil pipelines, then this is the committee that will get the job done.

I regret that this is the last week of the session, and I have a number of other meetings I should be attending and have been attending already this morning and I will not be able to stay for the entire hearing. But I will study each of the submitted statements carefully. I can assure you that this committee will take the issue of oil pipeline regulation seriously if the present system of economic regulation is not performing well.

Thus, these hearings are very important in helping us establish an agenda for the next session. And I thank you, Mr. Chairman.

Senator STEVENS. Senator Long?

OPENING STATEMENT BY SENATOR LONG

Senator LONG. Thank you very much, Chairman Stevens. Let me thank you for calling these hearings and pursuing this matter. I agree with what Senator Cannon said in his statement, and I intend to support those views.

It has been a privilege for me to work with Senator Cannon and also you, Senator Stevens, in the deregulation area. And to the extent that we can make progress in deregulation, I think we will achieve a national purpose. And I'm anxious to hear what the witnesses have to offer. And I hope that—Senator Stevens, I assume you're supporting this measure. Is that correct?

Senator STEVENS. That is correct. There is an amendment that I don't support yet, at least.

Senator LONG. Well, I hope that we can get together on something that will meet the needs of the industry as well as show proper regard for the consumer. You and I have worked together on matters of this sort in the past, and I believe between the three of us we ought to be able to help promote legislation that would be good for the industry and for the public. So I'm pleased to be a part of this.

I will have to leave during the day but I think I will ask Senator Cannon to represent me, and I will ask you to represent me after he has to leave.

Senator STEVENS. Thank you both for being here, and we will try to proceed through this list of witnesses and welcome your participation and your assistance, which we will need if this bill is to be completed before the end of this Congress.

[The bill follows:]

II

97TH CONGRESS
1ST SESSION

S. 1626

To amend the Department of Energy Organization Act to clarify the jurisdiction of the Federal Energy Regulatory Commission, to reform and improve the regulation of oil pipelines, and for other purposes.

IN THE SENATE OF THE UNITED STATES

SEPTEMBER 15 (legislative day, SEPTEMBER 9), 1981

Mr. NICKLES (for himself, Mr. WALLOP, and Mr. MURKOWSKI) introduced the following bill; which was read twice and referred to the Committee on Energy and Natural Resources

OCTOBER 23 (legislative day, OCTOBER 14), 1981

Referred jointly to the Committees on Commerce, Science, and Transportation and Energy and Natural Resources, by unanimous consent

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A BILL

To amend the Department of Energy Organization Act to clarify the jurisdiction of the Federal Energy Regulatory Commission, to reform and improve the regulation of oil pipelines, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Department of Energy Organization Act Amendments of 1981".

SEC. 2. It is the purpose of this Act—

(1) to foster a competitive oil pipeline industry and assure service on an equal basis without unjust discrimination;

(2) to induce the investment in new oil pipeline construction and expansion necessary to achieve maximum productivity; and

(3) to encourage the elimination of unnecessary regulation.

SEC. 3. (a) Section 306 of the Department of Energy Organization Act (42 U.S.C. 7155) is repealed.

(b) Section 402(b) of the Department of Energy Organization Act (42 U.S.C. 7172(b)) is repealed.

(c) Section 402 of the Department of Energy Organization Act (42 U.S.C. 7172) is amended by adding at the end thereof the following:

"(i) Subject to section 4 of the Department of Energy Organization Act Amendments of 1981, there are hereby transferred to, and vested in, the Commission such functions which were transferred to the Secretary under section 306 of this Act (as section 306 existed on the day before the date of enactment of this subsection) and there are vested in the Commission such functions and authority which were transferred to, and vested in, the Commission under subsection (b) of this section (as subsection (b) existed on the day before the date of enactment of this subsection).".

SEC. 4. (a) Except as provided in subsection (b), those provisions of law which vested functions transferred by section 306 and 402(b) of the Department of Energy Organization Act, are repealed to the extent those provisions of law vest authority to suspend, determine, or prescribe rates, fares, or charges for the transportation of oil by pipeline.

(b) The repeal in subsection (a) shall not apply with respect to the vesting of authority to suspend, the determine, or prescribe rates, fares, or charges which are for the transportation of oil by the trans-Alaska pipeline.

Senator STEVENS. First, if there is no objection, we would like to go by panels. The first panel would be Mr. Coburn from the Office of Competition, Congressional, Intergovernmental and Public Affairs in the Department of Energy; and Mr. Baxter, the Assistant Attorney General of the Antitrust Division. Would you two gentlemen lead off, please? If either one of you would like to go first, please do so.

STATEMENTS OF LEONARD L. COBURN, DIRECTOR, OFFICE OF COMPETITION, CONGRESSIONAL, INTERGOVERNMENTAL AND PUBLIC AFFAIRS, DEPARTMENT OF ENERGY; AND WILLIAM F. BAXTER, ASSISTANT ATTORNEY GENERAL, ANTITRUST DIVISION, DEPARTMENT OF JUSTICE

Mr. COBURN. Thank you, Mr. Chairman. I am Leonard Coburn, I am the Director of the Office of Competition at the Department of Energy, and I appreciate the opportunity to appear before you and other members of the committee to present the views of the Department of Energy on this important issue.

I would like to briefly summarize my written statement and submit the entire statement for the record, if that would be appropriate for the committee.

Our position is essentially that oil pipelines should not be subject to any economic regulation, but we do believe, however, that one particular pipeline, the trans-Alaska pipeline system [TAPS], should remain subject to regulation.

At the Department of Energy, we are particularly concerned about the potential impact that the TAPS system, if it were deregulated, could have on exploration and lease sales on the Northern Slope of Alaska. For all other pipelines that are deregulated, we believe that some provision should be made for the reimposition of regulation of an individual pipeline when it can be demonstrated that a pipeline has significant monopoly power. Because regulation is appropriate only when there is insufficient competition, the applicant should bear a meaningful burden of justifying reimposition of regulation.

The Office of Competition at the Department of Energy conducted a study to determine whether the oil pipeline industry was competitive and whether there were any particular problems within the industry. We have submitted that study to the committee for your perusal and for your reference during these hearings, and in your continuing work on the issue of oil pipeline deregulation.

I would just like to briefly summarize the main conclusions from that study. We believe that the oil pipeline industry is generally competitive, and we have reached that particular conclusion based on the following factors.

First, pipelines compete with other pipelines. Most areas are served by more than one pipeline, and even though the number of pipelines serving any particular area are few and concentration may be particularly high, there are other factors such as ease of entry which may undermine or undercut any particular concentration in the market. Second, pipelines, to a great extent, compete with other modes of transportation such as tanker, barge, and, to some extent, truck distribution from nearby refineries.

Third, as I mentioned, entry conditions play a very important part in any study of the competitive process, and in the pipeline industry there are no particularly high barriers to entry that would make entry particularly difficult in the industry.

Fourth, there are particular types of incentives with respect to pipeline operating costs which create an incentive to keep pipelines relatively highly utilized. And finally, even where pipelines may exhibit some limited market power, the costs are relatively minor when compared to crude oil and product prices in the lower 48 States. And that fact is important in trying to determine whether maintaining regulation is appropriate; that is, whether the cost of regulation is outweighed by the benefits of regulation.

Finally, we have also suggested that, where deregulation is appropriate, there may be special situations which warrant some sort of different treatment, and we are particularly concerned that a special situation or a special case should not be used as justification for not pursuing deregulation in the lower 48.

We believe that there are procedures available to deal with these types of special cases. For instance, the Department of Energy has suggested in other hearings that a specific procedure can be used to reimpose regulation in the special situations. And the special situation we are talking about would be limited to a case where monopoly power and resulting economic distortion are quite pervasive.

In most situations, we would expect competitive entry, and that should be one of the situations or one of the factors that must be looked at in determining whether that particular special situation is one that should be subject to any sort of regulation.

We believe also that any aggrieved person should be permitted to request an administrative hearing before the Federal Energy Regulatory Commission if they believe, or the person believes, that the pipeline is exerting substantial monopoly power.

At the present time, the Department of Energy does not have a specific proposal to submit to the committee concerning these general ideas, but we have been working with your staff members, with other staff members of other committees, as well as other agencies in the executive branch, in attempting to come up with a specific bill or a specific formula for implementing these general ideas. When we do have a specific procedure, the DOE would be glad to submit it to the committee for your consideration and would be glad to discuss it with you in more detail.

That concludes my oral statement, and I am available for questions.

[The statement follows:]

STATEMENT OF LEONARD L. COBURN, DIRECTOR, OFFICE OF COMPETITION, CONGRESSIONAL, INTERGOVERNMENTAL AND PUBLIC AFFAIRS, DEPARTMENT OF ENERGY

Mr. Chairman, members of the committee, I am Leonard L. Coburn, Director, Office of Competition, Department of Energy. I appreciate the opportunity to appear before you today to present the views of the Department of Energy on oil pipeline rate deregulation. At the outset, let me indicate our position on this subject and then I will present the reasons for it. Oil pipelines should not be subject to economic regulation. We do believe, however, that the Trans Alaska Pipeline System (TAPS) should remain subject to regulation. At DOE, we are particularly concerned about the potential impact that TAPS deregulation could have on exploration and lease sales on the Northern Slope of Alaska. For all other pipelines that are deregulated, provisions should be made for the reimposition of regulation of an individual pipe-

line when it can be demonstrated that a pipeline has significant monopoly power. Because regulation is appropriate only where there is insufficient competition, the applicant should bear a meaningful burden of justifying reimposition of regulation. I will turn now to the reasons why we have reached this position.

WHY REGULATE

Regulation of petroleum pipelines initially was justified in 1906 to curb and prevent the abuses engaged in by monopolists such as the Standard Oil Trust. The abuses of the turn of the century pipeline owners included both denial of access to pipelines and exhorbitant rates charged on pipelines in order to control the crude oil producing fields. Since there have been extensive Congressional hearings examining these past abuses as well as a fully documented history which is available to anyone interested in the subject, I will not dwell on the past.

The initial reasons used to justify regulation, therefore, were the traditional ones—the control of monopoly power in pipelines through guarantees of access, control over rates, and regulation of discriminatory activity. Market forces were not permitted to operate to assure competitive results, and regulation through regulatory agencies was created to insure that the beneficial results of competition were achieved through regulation.

From an economist's viewpoint regulation has been justified because pipelines have natural monopoly characteristics; that is, they exhibit substantial economies of scale such that average costs continue to decline over the entire range of output. The classic case for the imposition of regulation exists when only one pipeline between two areas such as a refining area and a marketing area would be built and the pipeline monopolist exploits its monopoly power through anticompetitive conduct. I might add at this point that our analysis indicates that this theoretical basis for rate regulation has some basis in fact; however, overwhelmingly, the evolution of the industry shows that more than one pipeline exists in any given market.

REGULATION: BENEFITS AND COSTS

Because market forces in the early part of this century were not assuring competitive results, regulation was used to prevent inefficiencies and misallocation of resources stemming from the actions of the pipeline monopolist. These inefficiencies include (1) the excess profits garnered by the pipeline from other industry segments—producers, shippers, and consumers; (2) the losses in social welfare or efficiency stemming from prices that are higher than the competitive level and leading to suboptimal production and consumption; and (3) the elimination of control of other markets.

Basically, regulation is intended to squeeze out the various forms of inefficiencies that result from monopoly behavior. But regulation also can impose costs, such as administrative cost, the distortion of investment incentives, and the managerial disincentives to minimize costs. If, however, the pipeline industry has become competitive over the years, then regulation no longer may be required to control monopoly power. Then the administrative and other costs associated with regulation could be avoided without yielding to the monopoly power of pipelines. The issue, therefore, is whether the pipeline industry has become sufficiently competitive over the years to achieve the benefits of the marketplace thereby avoiding the necessity to continue to rely upon regulation which impose administrative and other costs.

PIPELINE INDUSTRY COMPETITION

The effectiveness of the competitive process usually is assessed by looking at the structure, behavior, and performance of an industry. Structure is indicative of the ability and likelihood of firms in an industry to act independently or collusively. The concentration of the firms in an industry is an aspect of structure that yields an objective criterion from which subjective judgments can be drawn. The conditions of entry, another aspect of structure, play an equal, if not paramount role, since high concentration can be undermined through entry. The behavior of firms in the industry often follows from the industry structure and indicates its competitive or anticompetitive tendencies. Industry performance is examined to determine whether the industry yields competitive or noncompetitive results, e.g., are profits at or above competitive levels.

The Office of Competition/DOE has examined the competitive process and structural aspects of the pipeline industry and has concluded that, generally, the industry would be effectively competitive in the absence of regulation. The study upon

which these generalizations are based has been submitted to the Committee. This general conclusion is based upon the following:

Pipelines compete with other pipelines. Most areas are served by more than one pipeline. Even though concentration is relatively high in most markets, the competitive process still functions well because of other important factors.

Pipelines to a great extent compete with other modes of transportation, such as tanker, barge, and to some extent truck distribution from nearby refineries. This sets a limit on how much pipelines can charge before a switch to an alternative will be made.

Entry conditions are relatively easy and the two potential entry barriers, economics of scale and capital requirements, are relatively low. Thus, high concentration is undermined by the relative ease of entry into the industry.

Pipeline operating costs create incentives to keep pipelines relatively highly utilized. In times of slack demand pipelines will be vigorous rivals to obtain volume to fill their pipelines in order to avoid increased per-unit operating costs. In times of high demend, however, this rationale becomes less important.

Where pipelines do exhibit some limited market power, the costs are relatively minor when compared to crude oil and product prices. Pipeline tariffs in the lower 48 states average thirty cents to seventy cents per barrel compared to crude oil prices in the $30 to $35 per barrel range. Additionally, product markets, such as retail gasoline distribution, are highly competitive, limiting the ability of pipelines with market power to pass through higher costs to consumers.

This concludes my statement. I am available for any questions.

PETROLEUM PIPELINE DEREGULATION: A COMPETITIVE ANALYSIS

I. INTRODUCTION

The petroleum pipeline industry is at a regulatory crossroads. Down one road lies the path heavily trodden in the past; the road of regulation. Down the other road lies a way less traveled, but one that is gaining more and more adherents, the road of deregulation. The time is propitious since the Federal Energy Regulatory Commission (FERC) as well is at a crossroads. Before it lies the choice of pursuing the road well worn, or the road less traveled by, since the entire issue of petroleum pipeline regulation is now pending before it.[1] Which road FERC takes, and which road the Congress can take, can make all the difference to the petroleum pipeline industry, to the petroleum industry, and to the nation.

This paper proposes that the road less traveled by be chosen. The case for pipeline deregulation is strong and should be tested now since pipeline regulatory choices are under consideration. This paper looks at the petroleum pipeline industry in general, describing its characteristics. It describes the evolution of the present regulatory structure. It discusses the choices now available to FERC and to the Congress. Finally, it examines the deregulation option and concludes with the reasons why deregulation ought to be tried now.

II. PETROLEUM PIPELINE INDUSTRY CHARACTERISTICS

The petroleum pipeline industry essentially is an invisible industry since the overwhelming portion of its facilities are buried beneath the earth. Despite its invisibility it is a substantial carrier of intercity freight, representing about 24 percent of total 1977 intercity freight.[2]

A. Industry Statistics

The interstate petroleum pipeline network is extensive, estimated at about 227,000 miles of pipe.[3] [Private carriers[4] are estimated at about 16,000 miles and gathering lines[5] are estimated at about 67,800 miles.[6]] The industry normally is compartmentalized according to the type of liquids transported, that is, crude,[7] refined products,[8] and liquid petroleum gases/natural gas liquids.[9] The 227,060 miles of petroleum pipelines, therefore, consist of 145,770 miles of crude pipelines, 63,700 miles of refined product pipelines, and 17,590 of LPG/NGL pipelines.[10]

Pipeline mileage does not tell the whole story about pipeline transportation because the capacities of the pipelines vary substantially. Capacity of a pipeline normally is considered to be the volume of liquid that can be moved through the pipeline between two points during a given time period using existing equipment.[11] The capacity of a pipeline is dependent upon a number of variables, the most important being pipeline diameter, pipeline length, pumping equipment in place, locational differences, pipeline topography, viscosity, temperature, and gravity of the liquid being pumped.[12] Because of the wide capacity variations among pipelines, another measure has been used to indicate differences among pipelines other than length, namely, the barrel-mile. This measurement indicates the number of barrels that can be shipped through one mile of

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pipeline in a given time period. The barrel-mile measure, therefore, is the product of multiplying the capacity of the line by the length of the line.[13] Barrel-miles for the petroleum pipeline system is in excess of 4 trillion barrel-miles [4,068,906,850] divided into 2.4 trillion crude barrel-miles and 1.7 trillion refined product barrel-miles.[14]

Crude and product flows through the pipeline system tend to be mono-directional.[15] The major crude flows are from the Southwest to the Gulf Coast and to the Central and Upper Midwest, and from the Gulf Coast to the Central and Upper Midwest. These flows represent the natural distribution pattern from the crude producing fields in Texas, Louisiana, New Mexico, and Oklahoma to the major refining complexes along the Gulf Coast, and Central and Upper Midwest.[16] They also represent the major crude flows of imported crude to inland refineries, predominantly from the Gulf Coast to the Central and Upper Midwest. A comparison of refinery receipts of both domestic and imported crude oil by types of transportation will illustrate these flows more dramatically.[17]

Refined product flows from the Gulf Coast to the Southeast and Northeast, with some movement from the Gulf Coast to the Central and Upper Midwest.[18] For the movements to the East Coast, pipelines accounted for about 68 percent, while tankers and barges accounted for about 32 percent. For the movements to the Midwest, pipelines accounted for about 77 percent, and tankers and barges accounted for the remaining 23 percent.[19]

B. Pipeline Ownership

The petroleum pipeline industry is highly integrated. Most of the systems are owned by oil companies; only a small number of pipelines are owned by companies not otherwise affiliated with the oil industry

(denominated independents). The industry also is significantly jointly owned, that is, there are a substantial number of pipelines owned or operated by more than one oil company.

In a recent study by DOE,[20] 147 pipeline systems were identified, 88 were owned by majors, 36 were owned by nonmajors, and 23 were owned by independents.[21]

DOE's study also considered pipeline ownership based upon barrel-miles. For 114 pipeline systems the majors accounted for 91.03 percent of total barrel-miles, nonmajors for 2.48 percent, and independents for 6.09 percent.[22] The predominance of the majors is indicated also by examining the market shares of the top firms in the industry. The four largest systems, all owned by majors, comprise 51.14 percent of total barrel-miles. Of the eight largest firms, seven are owned by majors. While these eight systems comprise 66.74 percent of total barrel-miles, the one independent has a 2.03 percent share, so that the seven majors comprise 64.71 percent. Of the twenty largest firms, majors comprise sixteen. The twenty largest represent 83.84 percent of total barrel-miles with the majors accounting for 77.28 percent of that total. In addition, jointly owned systems comprise a significant portion of the total barrel-miles. Of the twenty largest systems, eleven are jointly owned and operated; these eleven account for 62.86 percent of total barrel-miles. If all jointly owned lines are considered, this total would be increased to 75.09 percent of total barrel-miles.[23]

III. EVOLUTION OF PETROLEUM PIPELINE REGULATION

A. Federal Regulatory Authority Extended to Pipelines

The oil industry came into being in the U. S. on August 27, 1859, when Colonel Edwin Drake brought in the first oil well located near Titusville, Pennsylvania.[24] The petroleum pipeline industry was not far behind, the first successful pipeline was completed in October 1865 by Samuel Van Syckel.[25] By today's standards this pipeline was a rather sorry affair, consisting of a mere two inch diameter line running six miles. But its success started a series of events that made the ownership of pipelines one of the most important aspects in the struggle for control of the oil industry.

The early struggle for transportation dominance existed between railroads and pipelines.[26] Pipelines were used to transport crude from the producing fields to rail bulkheads, where the crude was transferred to the railroad for long distance shipment. By the mid-1870s, long distance pipeline transportation became a reality and the struggle for transportation control shifted to pipeline ownership as rail transportation became of lesser importance.[27]

John D. Rockefeller recognized the importance of controlling crude production fields through ownership of the means of transportation. He used control first of railroads and then of pipelines to further his goal of dominating the oil industry. Rockefeller at first used the rails to transport crude from the fields to his refineries in large consuming areas. He offered the railroads large volume shipments of crude oil in return for favorable rates. Railroads were played off against each other and a system of rate favoritism was maintained. As pipeline transportation

proved itself, Rockefeller used gathering lines to transport crude to the railheads and later was able to build or acquire pipelines that ran parallel to the railroads as a further method of maintaining his competitive advantage. The control over pipelines became the major factor that permitted Rockefeller and his Standard Oil Trust to achieve its dominant position over the oil industry during the late 1800s.[28]

During this same period, the railroads were exerting their power through the establishment of railroad monopolies, abusing competitors through various rate schemes.[29] President Theodore Roosevelt capitalized upon these abuses and requested the Congress to extend the Interstate Commerce Commission's (ICC) power to set maximum rates, to eliminate rebating and to extend ICC's powers generally. In 1906, Representative William P. Hepburn introduced the legislation requested by the President.[30]

The Hepburn bill became the vehicle for attacking the powers of the Standard Oil Trust. Senator Henry Cabot Lodge offered an amendment to the Hepburn bill to extend ICC powers to oil pipelines. The Lodge amendment stirred an enormous amount of controversy. Its supporters argued that pipelines ought to be common carriers and that the abuses perpetrated by the Standard Oil Trust and documented by the Bureau of Corporations (the predecessor agency to the Federal Trade Commission) ought to be brought under federal control. Its opponents argued that pipelines were merely plant facilities of refineries and that, unlike railroads, they ought to remain in the private domain of their owners. Furthermore, they argued that there should be no ownership separation between the operation and ownership of the goods transported.[31]

The result of the countervailing forces was the passage of the Hepburn Act on June 29, 1906, extending common carrier and rate regulation to petroleum pipelines, but not requiring any divorcement of ownership from the goods transported.[32] Each side claimed victory and in truth each had achieved a measure of victory. Petroleum pipelines now for the first time in their 41 years of operation were designated common carriers. A federal agency was given authority to set maximum rates for the transportation of oil through pipelines. The oil industry could claim, however, that integrated operations could continue since divorcement of operations was not required. Thus, the pattern established by the Standard Oil Trust, that is, of integrating backward into pipeline operations to control producing fields, could be continued by other companies either starting anew or growing as a result of the Standard Oil divestiture decree of 1911.[33]

B. Statutory Authority Over Petroleum Pipelines

The Hepburn Act amended the Interstate Commerce Act (ICA) which is the statutory authority over petroleum pipelines.[34] Section 1(1) of ICA provides:

> The provisions of this chapter shall apply to common carriers engaged in . . .
>
> (b) The transportation of oil or other commodity, except water and except natural or artificial gas by pipelines, or partly by pipeline and partly by railroads or water.

The most important regulatory provisions of ICA require that all pipelines: charge just and reasonable rates for their service;[35] provide and furnish transportation upon reasonable request;[36] establish reasonable through routes with other carriers;[37] and establish just and reasonable

rates for through transportation.[38] Authority is granted under ICA to establish just and reasonable rates either for single carrier transportation or for through transportation.[39] Pipelines cannot receive rebates,[40] cannot make or give unreasonable preferences or advantages to shippers,[41] cannot charge more for a short haul than for a long haul.[42] Tariffs for rates and service must be filed with the Commission.[43] The Commission can conduct investigations and hearings upon complaint or on its own initiative.[44] It can suspend newly filed rates up to seven months pending investigation.[45]

The Commission has no power to require certificates of public convenience and necessity prior to the commencement of operations. Pipelines do not need Commission permission to abandon or terminate service. The commodities clause of ICA does not apply to common carrier pipelines, nor do provisions regarding the extension of credit, nor those concerning merger, consolidation, common control, or interlocking directorates. The Commission cannot order extension of lines nor can it order pipelines to provide facilities needed to provide adequate service such as storage or tankage for terminal operations.[46]

C. Regulation Under ICC

Regulation under ICC could be characterized as one of benign neglect. ICC did little to enforce its authority, other than to establish general principles under which the industry has operated.

1. General Statutory Authority

ICC initiated action to define its authority shortly after the passage of the Hepburn Act.[47] ICC directed pipeline operators to file with the Commission schedules of their rates and charges for the transportation of oil. The pipeline operators resisted on the ground that they

were not common carriers, since their practice was to purchase oil in the field and to transport only that oil which they owned. With one exception the Supreme Court in The Pipe Line Cases sustained ICC's assertion of authority over the pipelines, ruling that the pipelines were common carriers subject to the requirements of the Interstate Commerce Act.[48] The Court held that the evident purpose of the statute "was to bring within its scope pipe lines that although not technically common carriers yet were carrying all oil offered, if only the offerors would sell at their price."[49] Only one exception was made to this general ruling, known as the Uncle Sam exception, for a pipeline engaged solely in transporting oil from its wells across a state line to its own refinery for its own use.[50]

A series of other cases ensued over the years which further delineated ICC's authority over pipelines. These cases appear to support the following conclusions:

- An interstate petroleum pipeline which holds itself out to transport petroleum or its products for others, or which purchases petroleum from others for shipment in its own lines, is a common carrier for all purposes.[51]
- An interstate petroleum pipeline which connects producing and refining facilities which are under common ownership with the pipeline is not a common carrier for any purpose.[52]
- An interstate petroleum pipeline which ships its own refined products and no others, between its own refinery and its own terminals, interconnecting with no other pipelines, is a common carrier for reporting purposes, but not for tariff and rate purposes, at least where there is no demand by others to use the pipeline.[53]

Besides these few efforts by ICC to establish the contours of its regulatory authority, the greatest portion of ICC's regulatory efforts relating to petroleum pipelines has been concerned with valuation.[54] The valuation procedure, initially responsive to constitutional requirements that utility rates be fixed in relation to the "fair value" of the utility's property, is now archaic.[55] Yet ICC continued using valuation practices eliminated in the case of most other regulated companies as a consequence of the Hope decision of 1944.[56]

2. Rate Regulation

Through this somewhat circuitous route, we arrive at the activities of ICC in the area of rate regulation. It was not until 1940 that ICC expressed an opinion on the reasonableness of rates for petroleum pipelines. Reduced Pipe Line Rates and Gathering Charges dealt with the issue of the rates of 35 companies engaged in the transportation of crude oil gathering and trunkline systems.[57] The systems under review essentially were considered plant facilities by the Commission, that is, the shipper and owner were the same company, transporting oil purchased in the field over pipelines owned or affiliated with the company refining the crude oil. ICC found that despite the lack of independent shippers the rates were unreasonable since the rates were "not made with any relation to the cost of service (or) the benefits directly derived from common-carrier operations."[58] ICC adopted as its standard of reasonableness for pipeline rates the ability of the carrier to earn 8 percent on the valuation of its crude oil pipelines.[59]

ICC found that 14 of the respondents were not earning more than the 8 percent standard, but that the earnings of the remaining 21 were excessive.

Therefore, ICC entered an order requiring these 21, within 60 days, to show cause why they should not reduce their existing rates, on a pro rata basis, to come within the 8 percent limitation. No order was entered regarding the reasonableness of any particular rate or rates since no evidence had been taken with respect to particular rates.[60]

The reasonableness of rates on product pipelines was considered by ICC in Petroleum Rail Shippers' Association v. Alton and Southern Railroad.[61] ICC had under consideration the specific rates of two pipelines and determined that for refined petroleum pipelines rates should be established based on valuation and a rate of return of 10 percent.[62]

In another rate related case of the 1940s, ICC considered the reasonableness of the rates on several crude pipelines.[63] ICC relied upon the valuations of the pipelines where available and used the 8 percent rate of return standard espoused earlier in Reduced Pipe Line Rates.[64]

ICC did not consider rate issues for pipelines again until a complaint was filed in 1971 by a group of midcontinent shippers.[65] ICC, in examining the rates of a product pipeline, Williams, found that the pipeline's earnings were in conformity with its standard established in the Petroleum Rail Shippers' Association case.[66] While ICC did provide some explanation of how it determined the reasonableness of its rates, it did not examine the reasonableness of Williams' rates on particular movements since they had not been challenged, although the complainants had challenged the reasonableness of Williams' joint rates with another carrier, Explorer. ICC rejected any claims that the joint rates were unreasonable.[67]

ICC's decision was appealed to the Court of Appeals for the D.C. Circuit which severely chastised ICC for the manner in which it established

the reasonableness criteria for pipeline ratemaking.[68] After taking ICC to task for its out-of-date methodology, the Court remanded the proceeding because in the interim the Department of Energy Organization Act transferred jurisdiction over pipelines from ICC to FERC.[69] The Court acceded to FERC's request that it be given a chance to reexamine the entire ratemaking methodology for petroleum pipelines.

D. Rate Regulation at FERC

The experience at FERC so far has been limited to a thorough reevaluation of pipeline ratemaking methodology. While FEPC has continued using the regulatory scheme inherited from ICC, FERC has been reevaluating the entire system of rate regulation in the context of two proceedings, Williams Pipe Line Company,[70] and Trans Alaska Pipeline System.[71] A brief description of these two proceedings will place the overall regulatory dilemma into sharper focus.

1. Williams Pipe Line Company

The Williams proceeding commenced under ICC's regime in 1971. It led to a reaffirmation of ICC's traditional ratemaking methodology and resulted in a strong repudiation of ICC's methodology by the Court of Appeals for the D.C. Circuit. As a result, upon transfer of the case to FERC, FERC held a hearing in the fall of 1979 in which 15 parties participated, presenting 49 witnesses and over 8,000 pages of testimony. The Commissioners have sat through two oral arguments on the case, the first on June 30-July 1, 1980, and the second on November 19, 1981. A decision by the Commission has been promised shortly.[72]

The issues, although somewhat complex, can be distilled into two primary factions. The petroleum pipelines have argued that ICC's methodology

has worked well, so why tamper with it. In the words of one oil pipeline advocate, "if it ain't broke, why fix it." The other faction, composed of the midcontinent shippers, the Departments of Energy and Justice, and the staff of FERC, has urged that ICC's methodology is out-of-date, inconsistent with legal principles established over the past 40 years, and is not working well. Some other regulatory mechanism must be established, especially in light of the Farmers Union case.[73]

On the oil pipeline side, the advocates have urged that the hybrid methodology used by ICC is consistent with present law, and even if the exact formula used by ICC has some difficulties, it can be corrected without abandoning the entire process. This they urge would provide a workable solution, without transforming present regulation radically while permitting a smooth transition to FERC's regulatory regime.[74]

On the opposing side, the advocates have urged that sound regulatory principles require the abandonment of ICC's hybrid methodology and the use of the more modern ratemaking methodology of original cost, or some variation of original cost. This methodology has met with approval by the courts, by most regulatory commissions at the state level, and permits ease of regulation with minimum burden.[75]

The resolution of these issues is an important one for the industry. The mode of regulation affects rate of return, the trend path of rates over time, and the incentives to invest in new pipeline facilities.[76]

2. Trans Alaska Pipeline System

The opening of the Trans Alaska Pipeline System (TAPS) engendered a heated battle over the reasonableness of the rates filed by its owners. Upon the filing of the rates, the State of Alaska and the Department of

Justice joined the fray over the rates. After a court determination that ICC had the power to suspend the rates and investigate their reasonableness a thorough examination of their validity ensued.[77]

The hearing concerning the rates on TAPS also was transferred to FERC in 1977. The hearings were held in 1978 and part of 1979, producing almost 24,000 pages of transcript, 947 exhibits, and the testimony of 82 witnesses. On February 1, 1980, an Administrative Law Judge issued an initial decision, rejected the valuation methodology and relied on the original cost methodology instead.[78] The decision was appealed to the Commission, oral argument was heard on July 1, 1980, with no resolution of the issues to date.

Again, the issues concern the continued use of ICC's methodology versus some more modern ratemaking approach, such as original cost. Although the overall issues are similar to Williams, the context in which they arise is different due to the unique nature of TAPS, its high transportation cost versus the wellhead cost of the crude oil, and the impact on the royalties paid to the State of Alaska.[79] Another aspect of TAPS is that it may indicate that FERC is willing to impose a different mode of regulation on a pipeline with unique characteristics.

3. Rate Regulation Alternatives

The alternatives to FERC are several. It could continue ICC's regulatory approach. This would mean continuation of a hybrid methodology based on valuation with industry-wide rate of return guidelines. Pipeline-by-pipeline regulation would be avoided, except in unusual circumstances.

It could change to an original cost approach, or some variation of original cost. Here it has two major regulatory approaches. It could

impose a tight form of regulation, similar to its regulation of natural gas pipelines, examining the rates of each and every pipeline subject to its jurisdiction. Or it could impose a lighter form of regulation, indicating what the new methodology is, establishing a rate of return guideline for the industry, and avoiding individual consideration of rates unless warranted by complaint of shippers or FERC staff.

A tight form of regulation would impose substantial costs on FERC and the industry. The benefits to be derived from such tight regulation are speculative at best.

No matter which way FERC goes in the present situation, it must live within its statutory mandate to impose some form of rate regulation on the industry. The most direct and unambiguous route is for the Congress to solve the rate regulation morass. Rate regulation can be eliminated by an act of Congress. The following analysis explores the considerations attendant to such an action.

IV. DEREGULATION OF PETROLEUM PIPELINES

The question most often asked in the debate over deregulation of petroleum pipelines is, why deregulate? The essential question, however, is the obverse, why regulate? If regulation cannot be justified, then it should not be continued. This requires an understanding of why regulation was imposed initially, the costs and benefits of regulation, and the efficiency and competitive considerations of regulation.

A. Why Regulate?

Regulation of petroleum pipelines initially was justified to prevent abuses of monopolists such as the Standard Oil Trust.[80] The vital nature of pipelines as a tool to control the oil industry was recognized early in its history. The extension of common carrier obligations to pipelines was legislated in order to make sure that pipeline owners could not earn unreasonable profits from their pipeline control. Therefore, regulation was aimed at the monopoly power of the pipelines, and its imposition was an attempt to control the exercise of this monopoly power.[81]

The monopoly power of pipelines could be exercised through control over service or rates. Early regulation was aimed at both--guarantees of access, control over the level of rates, and their use in a discriminatory manner. Rates and access had to be regulated to assure equitable treatment.

This is a traditional justification for regulation: the natural monopoly conditions or the natural monopoly characteristics of the industry must be controlled since market forces will not work well to ensure competitive results. Regulatory commissions have been created to assure that the beneficial results of competition can be replicated through a regulatory regime.[82]

Pipelines fell within this justification because of their natural monopoly characteristics.[83] They exhibit substantial economies of scale so that average costs continue to decline over the entire range of output. Essentially, this means that the economic ideal is for one pipeline to serve an area in order to maximize efficiencies. Since no other pipeline would be built, the argument goes, regulation must be imposed to make sure that the pipeline monopolist does not exploit its monopoly power through denial of access, other service discrimination, or through rate exploitation.

While it is clear that pipelines do have natural monopoly characteristics, it is unclear whether pipelines can exercise monopoly power. There are at least three ways a pipeline's monopoly power could be exercised: (1) charging prices that are higher than competitively determined prices; (2) discriminatory use of existing pipeline facilities; or (3) deliberately constructing pipelines that are smaller than the economically efficient size in the long run.

Taking the last first, pipeline undersizing caused by underconstruction of pipeline facilities has been alleged by some, including the Department of Justice, to be used by pipelines as a means of avoiding rate regulation and as a means of exercising monopoly and market power.[84] This theory rests on the notion that integrated oil companies have an incentive to undersize their pipeline facilities so that they can exercise market power in the upstream or downstream markets served by the pipeline and in which the oil companies participate. For example, a pipeline owner that markets gasoline in a market served by the pipeline has an incentive, so the argument goes, to undersize the pipeline so that the marginal barrel of gasoline sold in the downstream gasoline market is priced based on a higher cost transportation

mode. The gasoline marketer which uses the pipeline will reap an economic rent because it can charge a gasoline price based upon the higher-cost transportation alternative, pocketing the rent garnered because it used a lower-cost pipeline. For this strategy to be successful, the pipeline owner must be a significant participant in the downstream market, the pipeline's throughput must comprise a significant share of the downstream market, and the pipeline's transportation cost must be lower than alternatives serving the market.

This undersizing theory was expounded in several case studies issued by the Department of Justice.[85] It was uncertain whether the theory was considered to be generally applicable until DOE issued a report using empirical data covering all jurisdictional pipelines over an extended period of time.[86] That report found generally that pipelines have not been undersized. While in a few instances capacity problems were demonstrated, the causes were varied, such as a shift in Canadian export policy which altered midcontinent transportation patterns. Therefore, the undersizing theory is not borne out by empirical evidence. Moreover, the theory postulates that undersizing would be used as a device to avoid rate regulation. If rates are deregulated, that rationale for resorting to such a practice disappears.

The second way monopoly power can be exercised is through the discriminatory use of existing pipeline facilities. This is essentially a concommitant of the exercise of monopoly power using the price charged for the service (see next paragraph infra). As with such power over prices, an examination of the competitive process will determine the ability of pipelines to engage in discriminatory practices.

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Lastly, pipelines could exercise their monopoly power by charging prices for transportation services that are higher than competitively determined prices. The ability of pipelines to engage in these practices can be determined by examining the competitive process within which they operate. Assuming for the moment that pipelines could exercise this form of monopoly power, what is to be gained by regulation?

B. Benefits and Costs of Regulation

Regulation often is justified because the monopoly power of pipelines will lead to a misallocation of resources.[87] In an unregulated market, the firm can profit by raising pipeline transportation rates above the level that will yield a normal rate of return. The economic consequences of higher than competitive rates are that the end user in some regions will face higher prices and will transfer income to oil companies or transporters, creating consumption patterns that will be economically inefficient while total resources are misallocated. Alternatively, in some regions oil producers will face lower netback prices and therefore will produce at an economically inefficient rate. The economic consequences, therefore, can affect either consumers, shippers, or producers, or some combination.

The magnitude of these efficiency losses depends upon the elasticity of demand for pipeline services, which in turn depends upon the elasticity of final demand in the product market, the availability of alternative pipeline transportation, the potential for constructing a new pipeline, and the availability of alternative modes of transportation, primarily waterways and to a lesser extent rail or truck.

Each of the factors affecting elasticity of demand reflects the competitive structure, behavior, and performance of the industry. If the industry is not competitive, pipelines will be able to extract an economic rent in the absence of regulation. A careful review of the status of the industry relative to these factors is required to determine whether the industry is competitive and therefore to decide whether economic regulation is appropriate. These will be discussed later in this paper.[88]

1. Benefits of Regulation

There are three potential benefits from eliminating any potential monopoly power of pipelines through regulation. First, regulation can eliminate the economic rent garnered from other segments of the industry, namely, producers or consumers (both shippers and ultimate consumers). Second, regulation can eliminate the losses in social welfare or efficiency caused by prices that are higher than the competitive level, and leading to suboptimal production and consumption. Third, regulation can eliminate the ability of pipeline owners to use their monopoly power to control other markets.

The first justification put forth by supporters of regulation is the ability to eliminate economic rent. (Actually, this rent is not eliminated but is redistributed.) How does this rent occur in the first place? In a competitive environment, rates would be the lowest consistent with a reasonable return on investment, taking into account the opportunity cost of alternative investments.[89] The producer would have no ability to maintain higher rates over the long run since as new entry occurs rates would fall back to the competitive level. If pipelines do have natural monopoly characteristics, and the industry does not conform to the competitive

market, they have some control over the ability to set rates, even with free entry. As a result, rates on pipelines will tend to rise to the level of the next least costly alternative, but no higher, since shippers will shift to that alternative and abandon the pipeline. Assuming pipelines are less costly, and in some instances they are less costly than the alternative,[90] the owners of the pipelines will accrue a sum in excess of the competitively determined rates, an economic rent.

The consequences of this result are several. From a crude oil producer's point of view, higher pipeline transportation rates mean lower wellhead prices, and therefore a decreased incentive to produce, assuming that the transportation cost cannot be passed through downstream because of the existence of competitive markets. Thus, one direct effect of deregulation can be lower crude oil production. Another effect can be that consumers of petroleum products are paying more for their products than desirable, assuming the ability to pass through some higher costs. Either consumption will decrease caused by switching to some other alternative, or consumer costs will rise due to the inability to switch. The ultimate consequence from both perspectives is that crude oil production and petroleum consumption are not at optimal levels, leading to a less than optimal allocation of resources.

The question then is, is it realistic to assume that these efficiency consequences, if they exist, are large and that regulation is worthwhile? With respect to the crude oil producer, it is questionable whether unregulated rates will lead to less crude oil production. First, transportation costs are very small relative to the wellhead price of crude oil, except in Alaska. With crude oil prices in the $35.00 per barrel range and average

pipeline transportation costs for the lower 48 states in the $0.30 to $0.70 range, the production disincentive is small, if not nonexistent.[91] Pipeline rates may rise with deregulation and, therefore, the question is whether the costs of regulation outweigh the transfer of wealth from oil producers to pipeline companies. Although this seems to imply purely a wealth transfer, there may be some losses along the way so that efficiency concerns are involved and not merely equity concerns.

Second, many oil producers also are pipeline operators and owners. In this instance, the production disincentive disappears entirely, since pipeline rates become meaningless. The oil is shipped at cost no matter what the rate is, since the rate is purely an accounting transfer and nothing more to the producer-transporter. This is somewhat over-simplified since the transfer cost may not be at the appropriate level based on a profit maximizing strategy taking into account the opportunity cost of the service, that is, what others would be willing to pay.

Deregulation, however, may have one side effect that has nothing to do with efficiency, namely, alter the revenues collected by the federal government under the windfall profits tax.[92] The crude oil windfall profits tax is calculated as a percentage of the difference between the wellhead price of crude and a base price. The cost of transportation directly affects the wellhead price, since increased transportation costs reduce wellhead prices. The base price, however, is not affected. Thus, an increase in transportation costs in the lower 48 narrows the difference between the wellhead price and the base price so that the crude oil windfall profits tax liability is reduced. Depending upon the ability of pipeline owners which also are crude producers to raise pipeline transportation

rates, independent producers may be affected substantially. For the latter, higher transportation rates are real out-of-pocket costs, but they also lower wellhead prices and lower crude oil windfall tax liability.

The crude oil windfall profits effect is one-sided with respect to North Slope crude. When the tariffs on the Trans Alaska Pipeline System (TAPS) go down, changes occur both in the wellhead price and the base price. The wellhead price decreases due to the netback effect, the base price decreases also because the crude oil windfall profits statute requires an adjustment to the base price of North Slope crude oil when the TAPS tariff decreases.[93] If tariffs go up, however, no adjustment is made to the base price. Therefore, there is a one-sided incentive from the crude oil windfall profits tax to shift costs between the wellhead and the pipeline.

In the case of Alaska, however, there are other incentives to shift costs between the wellhead and the pipeline. The primary owners of the pipeline also are the primary producers on the North Slope.[94] Increases in pipeline rates will lower wellhead prices since the final price of North Slope depends upon a competitively determined landed price on the West Coast. Higher transportation costs cannot be passed through downstream, but are reflected upstream in lower wellhead prices. Lower wellhead prices, in turn, will mean lower royalty payments to the State of Alaska. Therefore, North Slope crude oil producers can maximize their overall earnings by keeping wellhead prices low and raising pipeline rates. For the owners of both crude and pipeline this becomes an internal transfer. But for the crude producers with no pipeline ownership, this can become a real disincentive to produce, since the pipeline cost represents about 18 percent of wellhead prices ($6.20 pipeline tariff versus $35.00 wellhead price).[95]

The effect on the consumer of increased pipeline rates is more difficult to determine. In 1979, total pipeline revenue was about $5.78 billion, with about $2.74 billion attributable to TAPS.[96] This leaves about $3.04 billion in revenue for the lower 48 states. If regulation keeps prices 20 percent lower than without regulation, total wealth transfer would approximate $600 million. While this is a significant sum, it translates into about 8.4 cents for every barrel of liquid carried in the system or 0.2 cents per gallon of liquid carried.[97] If deregulation meant a 100 percent increase in rates, the per gallon impact would be one cent. In some cases the wealth transfer may be from producers to pipelines rather than from consumers to pipelines. The effect would be incalculable.

Another benefit derived from regulation is the gain in efficiency or social welfare. Rates that are above costs lead to suboptimal allocation of resources, which not only produce the income transfers indicated above, but actual deadweight losses to society.[98] One estimate puts this loss at about 12.7 million per year, a rather small sum.[99] Thus, the benefits of regulation in this instance appear minimal.

The other form of efficiency loss from increased pricing is the misutilization of pipeline facilities. It would take the form of mis-sizing the pipeline in the first instance or underutilizing the pipeline once built. Initial mis-sizing could lead to overall higher transportation costs if higher cost alternatives must be used. Underutilization of existing facilities could lead to higher unit costs, since at some point unit costs rise dramatically as throughput falls off.[100] Quantifying these costs would be impossible.

Finally, regulation could be a means of eliminating or dampening the ability of pipeline owners to use their market power to control other markets. The argument here is that a small number of oil companies control the markets for petroleum products. If this is the case, then these companies already are profit maximizing through their present control of refining and marketing. Lifting pipeline rates will not add to this profit maximizing price. Higher rates may shift the profit among the various industry segments.

The companies also may exert some measure of control over crude purchasing. This control probably exists now anyway since it is rare that more than one pipeline serves a producing field.[101] Thus, higher rates may transfer some profit from producers to transporters, with little effect on production. Furthermore, if rates increase too much, there may be some incentive for a new gathering system to enter the field. Therefore, deregulating pipeline rates is unlikely to add to any existing control oil companies may have over downstream or upstream markets.

2. Costs of Regulation

On the other side of the issue, regulation can impose substantial costs. First, there are the administrative costs associated with regulation, which tend to increase as the specificity of regulation increases. Second, regulation tends to distort investment decisions if it imposes a rate of return that is too low. Third, regulation can create managerial disincentives to keep costs to their minimum.

It is clear from experience that any form of regulation imposes administrative costs, both those related to supporting an administrative oversight organization and those related to industry compliance with

regulatory requirements. In fiscal year 1981, FERC spent about $7.5 million on petroleum pipeline regulation. This, however, does not account for increased regulation of rates now under consideration. It is not unreasonable to expect that the upperbound of oil pipeline regulatory costs would be similar to those for gas pipelines.[102] In fiscal year 1981, FERC spent about $23.6 million on gas pipeline regulation.[103] The regulatory expenditures incurred by the industry and other interested parties must be included also. One estimate indicated that this regulatory expense was at least equal to the expense of FERC.[104] More than likely, this expense will exceed those of FERC by a substantial portion. Thus, direct administrative costs will be about $48 million per year.

The second cost of regulation is the distortion caused by improper investment decisions because regulation may result in rates of return that are too low. In this situation, the pipeline industry may refuse to invest in new capacity to meet new demand. Or the industry may invest only when no other alternative is available. The costs of such investment distortions are incalculable, but could be very high.

The likelihood that FERC will establish a rate of return below the cost of capital is high. Present experience with the electric utility industry indicates that the percent rate of return for investor-owned utilities is substantially below market costs of capital.[105] The Secretary of Energy has called for a rate of return at least four percentage points higher.[106] With pipelines differing from electric utilities in terms of not being franchised public utilities with an obligation to provide service, it is highly likely that private investors will not be willing to invest in new facilities. This is especially so in view of the

common carrier requirements and the free rider problems that result.[107] The trade-off is one of having no new facilities with the ensuing higher costs associated with alternative transportation modes, or new pipeline facilities that earn some limited economic rent due to their monopoly characteristics. In this situation, the costs clearly outweigh the benefits of regulation.

Finally, regulation creates a disincentive for pipeline management to keep costs low since under a regulatory regime all costs can be passed along. If regulation permits, and in essence guarantees a fair rate of profit that can be passed through to ratepayers, the incentive to keep costs as low as possible disappears. The only remaining incentive is created by regulatory lag in granting rate increases or rate reductions when costs change. Until rates are changed to reflect changes in costs, the utility has the incentive to keep costs down and enjoy a short-lived increase in profits. But this incentive is very short-lived, while long-run incentives tend toward less efficiency and technological innovation. With pipeline revenues approximating $3 billion per year (excluding TAPS), a small percentage increase in costs could be substantial, a five percent increase amounting to $150 million per year.

Before concluding this section concerning the desirability of regulation or deregulation, the last question that must be addressed is the competitive process within which the industry operates. If it is clear that the industry is noncompetitive, then the economic rents that could be garnered by the industry may be substantial. If the industry faces some competition, then the economic rents and inefficiencies would be dampened or eliminated. This aspect of the industry will be discussed next.

C. Competition Issues

The competition issues depend upon the structure of the oil pipeline industry, that is, how they are owned, by whom, the level of concentration, and the conditions of entry. These issues, in turn, depend to a large extent upon the availability of alternative methods of transportation (water, truck, and rail) and upon interpipeline rivalry. To the extent that waterborne alternatives and interpipeline rivalry exist, the monopoly power of pipelines is dampened or eliminated. Therefore, the monopoly power of pipelines can be dampened or eliminated in several ways: through competition with alternative transportation methods; through interpipeline rivalry; through regulation; and through the structure of the industry (levels of concentration and conditions of entry).

Competition analysis is undertaken through the use of an analytic methodology that relies upon the structure, behavior, and performance of an industry.[108] Structure is indicative of the ability and likelihood of firms in an industry to act independently or interdependently. The concentration of the firms in the industry is an aspect of structure that yields an objective criterion from which subjective judgments can be drawn. The conditions of entry, another aspect of structure, play an equal, if not paramount role, since high concentration can be undermined through entry. The behavior of firms in the industry often follows from the industry structure and indicates its competitive or anticompetitive tendencies. Industry performance is examined to determine whether the industry yields competitive or noncompetitive results, e. g., are profits at or above competitive levels.

Industry structure is analyzed in the context of product and geographic markets.[109] The major criterion used to determine product markets is the degree of substitutability among products. In this instance, the

relevant product market is the transportation of crude oil and refined products.[110] In many short-haul markets, transportation alternatives exist among various types of transport modes, namely, pipeline, barge, tanker, truck, or railroad.[111] In long-distance transportation, however, the market is usually limited to pipeline and waterborne alternatives (barge and tanker), since the costs of railroad and truck are so high that they do not represent long-term alternatives.[112] Therefore, the focus will be upon petroleum transportation by pipeline and water.

Geographically, transportation markets are much more difficult to delineate. Some studies have focused upon national transportation markets.[113] A national geographic market leads to meaningless results, since transportation is regional, at least. For example, transportation entities in California do not compete with like entities on the East Coast.

Others have focused upon particular regions to discuss competition.[114] The Piercey study used the five Petroleum Administration for Defense Districts (PADD) as geographic markets. Again, this may be too broad, since transport entities in one part of the PADD may not compete with entities in other parts of the PADD. In support of this approach, however, one could argue that this is the best level for data, and the industry traditionally has broken itself down into these areas and consider them acceptable geographic markets. But rigorous geographic determinations would reject these aggregations and therefore something better must be used.

Another approach is to examine the transportation services available between areas, a corridor approach to transportation markets. This approach has been criticized as being too limited since it may not indicate

the entire range of options at either the origin or destination.[115] For example, a refiner in Houston could send its product via one group of pipelines to the East Coast, or through another group of pipelines to the Midwest. Or buyers at destination points may have pipelines from more than one corridor at tneir disposal.

Finally, a recent attempt to define markets focuses upon four types of buying-selling arrangements: those for buying crude, those for selling crude at the refinery, those for selling products at the refinery, and those for selling products to consumers.[116]

This paper uses several approaches in order to determine the competitiveness of the industry. It will rely upon the four-arrangements approach, the corridor approach, and some modifications of the two.

1. Corridor Markets

The corridor approach focuses upon groups of pipelines primarily from producing areas to refining areas. One recent study identified 10 crude corridors.[117] For products, the focus is upon groups of pipelines from refining areas to consuming areas. In the same recent study, five product corridors were identified.[118] These corridors include not only pipelines, but water transportation also. In reviewing the corridors identified in DOE's study, the number of crude corridors were overstated, so that in retrospect there should be seven or eight corridors. Using the data gathered for DOE's study, concentration ratios based upon capacity can be derived for these corridors. Table I indicates these concentration ratios. It should be noted that in several instances more than one pipeline owned by the same company is included. The reason for this is that often there is more than one routing even though both are owned by the same company.

Aggregating these routings according to companies would change the concentration ratios.

The concentration ratio results indicate that in most of the corridors four-firm and eight-firm concentration is high. In only one of the corridors does the four-firm concentration ratio fall below 50, the cutoff usually referred to as indicating high concentration. This same market also has an eight-firm concentration ratio of less than 80. In most of the other markets, four-firm concentrations exceed 70 and eight-firm concentrations exceed 90. One is tempted to conclude from this that the structure of the industry, at least based upon concentration ratios, indicates anticompetitive tendencies. This conclusion cannot be reached yet for several reasons. First, water transportation has not been factored in and, second, entry barriers have not been discussed. A third consideration is the utilization of this capacity and how it affects incentives to compete. These considerations will be discussed after the discussion of the four types of buying-selling arrangements approach.

2. Four-Arrangement Approach

The four-arrangement approach, that is, reducing the industry into four component parts, has been developed very recently and the findings have not been examined in any depth. The four components discussed were those for buying crude, those for selling crude at the refinery, those for selling product at the refinery, and those for selling products to consumers. Some examination of these components is necessary to determine the competitiveness of the pipeline industry.

a. Crude buying markets: Crude gathering markets were delineated on a state basis, for no other reason than that was the only

data available. Whether these areas can be considered markets is open to substantial question; however, there is no better way to delineate them given the data available.[119] In the seventeen states where receipts by interstate pipelines accounted for more than 75 percent of total crude production, four-firm concentrations ranged from 48 percent to 100 percent, with a weighted average at 64 percent. The major problem with this data is that intrastate pipelines have not been included. This may alter substantially the concentration ratios since in many states intrastate pipelines are significant gatherers. For example, Permian gathered about 5.2 percent of 1974 Texas production and was the seventh largest gatherer in the State.[120] Scurlock pipeline also operates an extensive gathering system and gathered about 2.6 percent of total 1974 Texas production, the eleventh largest gatherer in the State.[121] Even with intrastate gathers, however, and using the Judiciary Committee data, pipeline concentration ratios remain high and tend to indicate the existence of monopsony power on the part of crude oil gatherers.

b. Refinery crude purchasing markets: Refinery crude purchasing markets were grouped by Hansen into 39 separate refinery markets where refining capacity exceeded 50,000 barrels per day.[122] A determination was made based upon the location of the refineries in each market whether they could receive crude by water.[123] A further determination was made using a map to determine the number of pipelines serving each refinery market. The Hansen study concluded that in the most important refinery markets, water transportation was available to compete with pipeline transportation. Also, in most of those markets a substantial number of pipelines were available to compete with each other. The study

concluded that this segment of the industry was competitive, or that the availability of waterborne transportation would erode any potential competitive problem with pipeline transportation.[124]

The analysis used in the Hansen study is flawed. First, the number of pipelines was examined without considering their capacity. Concentration, therefore, could not be analyzed. Also, the visual inspection of the number of pipelines available in any location is not always a good indicator of whether capacity is available into the market since the pipeline may not actually serve the market. Second, the study assumed that, if a refinery market was located on a major waterway, waterborne transportation was available as a viable competitor. This inference is improper since data exist to determine whether a state receives crude by water. Finally, too many refinery markets were delineated, since in many cases, the areas were too narrowly drawn.

The foundation laid by the Hansen study can be augmented by using capacity data of individual pipelines.[125] Using this data, concentration ratios can be calculated based upon the 39 markets delineated and on a smaller number of markets that may make more economic sense. Also, using other data, an accurate determination can be made whether the refinery market receives crude via water.

Using the capacity data where available,[126] 24 of the markets had pipeline capacity in excess of refining capacity, three had no pipelines at all, only water, and seven had refining capacity in excess of pipeline capacity. For these seven markets, however, waterborne transportation was available, pipeline capacity caught up in later years, or data were incomplete. Thus, overall, there was at least a balance between refinery

capacity and pipeline capacity and more often than not pipeline capacity exceeded refinery capacity.

The second step in using the capacity data is to determine concentration ratios for the 34 markets. The weighted average concentration ratios for the 34 markets are 79.29 and 90.39 for four and eight firms, respectively, both very high and indicative of anticompetitive structural tendencies. In only one market, the Midland-Odessa area, did four-firm concentration fall below 50.

The Hansen study, too, indicated that refinery markets were highly concentrated, but indicated that many were located on major waterways. This ability to receive crude by water provided ample competition to dampen any potential monopoly power on the part of the pipelines, Hansen concluded. Hansen found that of the 39 markets, eighteen lie on major waterways. The eighteen represented about 78 percent of the refinery capacity of the 39 markets. But using DOE data indicating receipts of domestic and foreign crude by mode, actually only thirteen of the eighteen markets receive crude by water. Importantly, two of the top twelve markets do not receive crude by water or only negligible amounts.[127] While Hansen generally is correct, his overall conclusion is not as strong.

Finally, Hansen identified too many markets because he included too many markets where only a very small number of refineries operated served by one or two pipelines. An example is Catlettsburg, Kentucky. There is only one refinery located there, Ashland, and served by one pipeline, owned by Ashland. But a careful examination of the pipeline system indicates that Ashland has several alternatives available to it for receiving crude using a number of different combinations of pipelines. All must go

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through the Ashland pipeline to Catlettsburg, but that pipeline can receive from a number of different pipelines.

Perhaps a better approach is to examine major interconnecting points on the system, that is, points where many pipelines enter and then radiate out. Refineries ultimately served by one or two pipelines (usually owned by that refinery) can receive crude from various sources at the interconnection point. The interconnection points may be stated as follows: West and Northwest Texas (including Midland, Odessa, Wichita Falls, Corsicana, Teague, and Wortham, Texas); Longview, Texas; Houston-Port Arthur, Texas; South Louisiana; Cushing, Oklahoma; Patoka, Illinois; Chicago, Illinois; and Fort Laramie, Wyoming. From these major interconnection points the smaller refinery markets can receive crude. The number of pipelines serving each of these areas is substantially larger than the number of pipelines serving most of the 39 markets indicated by Hansen. Moreover, in each of these markets capacity is considerable. Concentration ratios for them are much more like the concentration ratios for the corridors identified earlier than for the weighted average ratios identified using the 39-market approach.

What becomes clear using this interconnection approach and relying upon existing data is that the major refinery complexes that ring the coastal areas of the country are served both by pipelines and by waterborne transportation, except for the Pennsylvania-Delaware-New Jersey area, which is served exclusively by water. Any potential pipeline monopoly power in these markets, and the potential is substantial, is ameliorated by the existence of crude arriving by water. It is the interior of the country that relies principally on pipelines, since

negligible amounts of crude arrive by water. While these markets are served by a large number of pipelines, it is also true that the capacity available is highly concentrated in a small number of pipelines, often owned in an interrelated fashion.[128]

c. Refinery product sales markets: The Hansen study utilized a similar approach to its refinery product sales markets as in its refinery crude purchasing markets. It utilized the 39 markets; however, Hansen was able to find state-wide data indicating receipts of product by product pipelines. Thus, he was able to indicate concentration ratios for the states in which the 39 refinery markets were located. Relying upon this data, Hansen calculated the weighted average four-firm concentration ratio for the 27 states at 74.6, with the range from a low of 60.13 to a high of 100.[129] Without considering waterborne transportation he concluded that concentration of the receiving pipelines is extremely high. But since about 75 percent of refinery capacity is located on significant waterways, he concluded that waterborne transportation is available to ameliorate any potential pipeline monopsony power.[130]

Hansen's approach in this market is better than his approach in the crude selling markets since he does have some state-wide data available. One minor flaw, however, is that he aggregated both refined product pipelines and LPG/NGL pipelines. Rarely do refined products and LPG/NGL liquids use the same pipeline. A better approach would have been to segregate the two types of pipelines in order to obtain a clearer picture of pipeline monopsony power.

The same DOE data used in the crude selling markets is available to examine the refined product sales markets. In the 39 markets delineated

by Hansen, refinery capacity exceeds pipeline capacity in 21, while pipeline capacity exceeds refinery capacity in 18. This is less of a problem than it appears. In many of the markets where refinery capacity exceeds pipeline capacity, the market is located in or near large metropolitan areas or adjacent to navigible waterways. Therefore, the need for pipeline capacity is reduced since deliveries can be made locally by truck, or can be made to waterborne entities. Similarly, for many inland refining areas where refinery capacity exceeds pipeline capacity, truck transportation plays a large role in relatively short-haul deliveries. Therefore, the existence of more areas with greater refinery capacity than pipeline capacity is easily explained and may not result in a competitive problem.

Where pipelines do exist (in 36 of 39 markets) the weighted average concentration ratios are very high.[131] Four-firm concentration is 79.62 and eight-firm concentration is 95.81. The four-firm concentration ratios range from 64 to 100.

The same kinds of problems exist in the 39 refinery product selling markets as outlined in the 39 refinery crude purchasing markets. Some attempt has been made to group the pipelines into corridors. With product pipelines, however, there are fewer recognizable corridors. There appear to be at least five major corridors, three thin corridors and a massive maze that is difficult to define as a corridor. The major corridors identified are the Gulf Coast-South and Northeast, Linden-Philadelphia-Delaware-west, Texas Gulf Coast-north, Cushing, Oklahoma-north and west, and Cushing, Oklahoma-north and east. The massive maze is the upper midcontinent. The three thin corridors are the upper Great Plains, the West Slope of Cascades, and California.[132]

In the major corridors, concentration is high. Only two pipelines comprise the Gulf Coast-South and Northeast corridor, Colonial and Plantation. For the other corridors the breakdown is as follows: Linden-Philadelphia-Delaware-west, six pipelines with four-firm concentration of 93.78; Texas Gulf Coast-north, seven pipelines with four-firm concentration of 89.95; Cushing-north and west, ten pipelines with four and eight-firm concentration of 80.65 and 96.59, respectively; and Cushing-north and east, four pipelines. (See Table II)

The maze of the upper midcontinent has not been broken down into concentration ratios because the systems criss-cross through the area producing no definable pattern. In the thin corridors no more than two pipelines exist in any one of them, except for California. (See Table II)

Finally, it is possible to develop the same type of major interconnection analysis used in the crude pipeline section. The major interconnection points would be the Louisiana-Texas Gulf Coast-north and northeast, Cushing radiating in all directions, the Linden-Philadelphia-Delaware refinery area radiating west and north, and the upper midcontinent area. While more systems would be added to the ones indicated in the corridor analysis, concentration still would be high. For example, the lines radiating out of the Louisiana-Texas Gulf Coast would mean aggregating the Gulf Coast to the South and Northeast and the Texas Gulf Coast-north. This would yield nine pipelines radiating out of the area, with four-firm concentration of 92.79 and eight-firm concentration of 99.48. Similar manipulations could be made for other areas; however, the concentration ratios would remain very high.

Two ameliorating factors are present. The first is the availability of water transportation and the second is the greater reliance upon trucks for product transportation. The percentage of products carried on water-borne commerce is somewhat greater than the percentage for crude. The Association of Oil Pipe Lines indicates that almost half of the ton miles of products carried in domestic commerce is carried by water carriers, while only about 41 percent of crude is so carried.[133] Furthermore, there are more water terminals for products than for crude so that some refining centers that do not receive crude by water do distribute or receive products by water.[134]

Secondly, truck transportation plays a much larger role in product distribution than in crude collection and distribution. Almost two and one-half times as much product than crude are carried by truck.[135] In fact, on a tonnage basis, truck transportation almost equals pipeline transportation. The distance disparity is apparent when ton-miles are compared. Here, water carriers rank first, pipelines rank a close second, and trucks a distant third. Since many refineries are located near large consumption areas, pickups by truck at refineries are substantial (if tons are compared) while the distance traveled is small compared to pipelines (if ton-miles are compared). Therefore, even with high pipeline concentration, transportation choices by many refiners are not limited to only pipelines. This imposes some upper limit on the ability of pipelines to exert their apparent monopsony power.[136]

d. Product consumption markets: The Hansen study relied upon Standard Metropolitan Statistical Areas (SMSAs) as the basis for market definition. Given that most products are sold locally, and that

there is little opportunity for consumers to obtain products other than on a local basis, this characterization is appropriate. Hansen examined 61 SMSAs with population in excess of 500,000. Twenty-eight markets were located on significant waterways. The remaining 33 were subject to varying degrees of transportation alternatives, either from rival pipelines, or nearby refineries.[137]

Whatever monopoly power may exist in these markets is strongly tempered by the highly competitive nature of many of the product consumption markets. Gasoline, the largest of the markets under consideration here, is highly competitive.[138] Transportation problems do not appear to stymie the competitive forces in the gasoline market. It is doubtful that the inland markets served by one or two pipelines will be any less competitive if pipelines were deregulated.

The focus in this section has been on one aspect of structure, namely concentration. While concentration is an important indicator of the ability of firms to act in an interdependent manner, it is not the only predictor. The other aspect, which many state is more important, is the nature of conditions of entry.[139]

The conditions of entry are important because if it is easy to enter the industry the effect of high concentration can be undermined by new and potential entrants. Potential competitors can impose substantial limits on the ability of existing firms to exert market power. If entry conditions are relatively difficult (if substantial barriers to entry exist), then high concentration is important since the market power it indicates will not be undermined easily by new and potential entrants.[140]

Entry into the pipeline industry is not restricted by regulation in the sense that a certificate of public convenience and necessity must be obtained from a regulatory agency. While environmental permits may be necessary, these are not the types of entry barriers that are usually associated with a regulated industry, nor do they usually prevent the entry of pipelines into the industry.

As pipelines are built into more environmentally sensitive areas, however, the difficulties associated with obtaining the necessary environmental permits may increase. For example, the proposed Northern Tier Pipeline, from Port Angeles, Washington, to Clearbrook, Minnesota, has been delayed for a number of years because of the need to obtain approximately 1,400 permits, including many environmental permits. The pipeline now faces a particularly difficult obstacle since the Governor of the State of Washington has denied an environmental permit for the pipeline because its route crosses under Puget Sound, an environmentally sensitive area. Another example of environmental difficulties existed with TAPS which necessitated the passage of special legislation to expedite the environmental permitting process.[141]

Environmental permits may take on an attribute of a barrier to entry. While most writers think of a barrier to entry in terms of the cost advantage an industry member has over the potential entrant,[142] they often neglect the importance of legal restrictions. For example, a legal restriction, such as an environmental permit, although costing the same to industry members and new entrants, may become a barrier to entry if new entrants cannot obtain one because the permitting authority refuses to grant more.[143] In this instance, entry may be impossible.

Pipelines must obtain rights-of-way in order to be built. The ability to obtain these rights-of-way may turn into an entry barrier if the same kind of reasoning applicable to environmental permits is applied to rights-of-way.[144] In the past the acquisition of rights-of-way has not been a serious problem. Many states have eminent domain laws giving the pipeline the power to condemn private land for use as a right-of-way.[145] Even with eminent domain authority securing the right-of-way may be a time-consuming task.[146] Eminent domain authority does not exist at the federal level; however, its nonexistence has not precluded extensive pipeline construction.[147] For pipelines which cross federal lands, the Secretary of the Interior controls the permitting process.[148] While the Secretary has the right to attach various conditions to the permit, it has not been an obstacle to entry into the industry. On the whole, while the theoretical existence of a legal restriction in obtaining the necessary right-of-way is possible,[149] in practice few, if any, pipelines have been stymied because of the lack of rights-of-way.[150]

While entry is not regulated, two conditions of entry can make the pipeline industry relatively difficult to enter by nonoil companies because they give existing companies a substantial advantage over new entrants. One is economies of scale and the other is access to capital.

Pipelines exhibit substantial economies of scale. This means that as the size of the pipeline diameter increases, throughput increases geometrically while unit costs increase linearly. Thus, as throughput rises, unit costs decrease throughout the entire range of pipeline diameters.[151]

This implies that a new pipeline constructed to compete with existing pipelines must be of sufficient size to utilize the economies of scale

inherent in pipelines. This means that sufficient volume must be available before a new pipeline will be built; otherwise the new pipeline will not enter if it cannot cover total cost. Since existing pipelines can expand more cheaply than new pipelines can be built up to some limit, this imparts an advantage to existing industry members. Furthermore, the new pipeline may have to enter at a size that is too large for the present market, thereby lowering the prices that can be charged by all industry members, which may forestall entry until the market grows sufficiently. Counterbalancing this advantage to existing industry members is that existing pipelines, in general, are not very big relative to the size of the market, so that new pipelines may not have to overcome substantial scale economies of existing pipelines.[152] While scale economies could be a barrier to entry, the proliferation of pipelines over the years is one indicator that entry into the industry has not been forestalled due to this factor. Whether this will hold for the future is less certain, because of the existence of a new generation of large diameter pipelines, and because the need for new pipelines is small given the slow growth in demand.

The second entry condition that may pose a barrier is access to capital. Pipelines are highly capital intensive, requiring substantial amounts of money initially in order to construct the pipeline. Operating costs once the pipeline is built and sufficient throughput is available are low by comparison. Financing of pipelines traditionally has been done either internally by the oil company for wholely owned lines (or undivided interest lines) or by the signing of throughput guarantees when joint ventures are involved.[153] Throughput guarantees represent long-term

commitments by the shipper-owner to use the pipeline at a certain level or cover all of its share of the operating and interest costs. These guarantees are highly valued by the investment community since they reduce the risk element substantially. Independent companies unable to obtain such guarantees face greater problems in arranging financing. Therefore, oil company-sponsored pipelines have an external financing advantage over independently owned pipelines. Internal financing is on an equal footing, however. Therefore, depending upon the size of the pipeline and the need for external financing, nonoil companies may be disadvantaged in obtaining throughput agreements usually needed for financing, and in their ability to obtain capital.

Entry theory recently has focused not only on the ability to enter an industry but also the ability to exit an industry.[154] This evolution of entry theory, which is part of what has become known as the theory of contestable markets,[155] posits that for an industry to be perfectly contestable entry must be free and exit absolutely costless. Free entry is used not in the sense that entry is costless or easy, "but that the entrant suffers no disadvantage in terms of production technique or perceived product quality relative to the incumbent."[156] Additionally, exit must be free and costless which means "that any firm can leave without impediment, and in the process of departure can recoup any costs incurred in the entry process. If all capital is salable or reusable without loss other than that corresponding to normal user-cost and depreciation, then any risk of entry is eliminated."[157]

Since the above analysis indicates that entry into the pipeline industry is relatively free, the next question, then, is whether the

pipeline industry permits free exit, that is, is exit costless, or are there costs associated with exit that impose entry barriers. Of course, it must be borne in mind that perfect contestability, like perfect competition, is merely a model against which economists measure the real world. Thus, absolutely free exit may never exist, but relatively free exit may be the optimum.

The issue, then, for the pipeline industry is not only whether entry is relatively easy, but also whether exit is relatively easy. In examining this question it is important to bear in mind whether costs are sunk costs, or merely fixed costs.[158] For example, airplanes might be individually costly; however, the costs are not sunk since their mobility from market to market and their ability to be resold makes the fixed cost unimportant as an entry barrier to a particular route.[159] An airport terminal, however, may be not only a fixed cost, but a sunk cost, since its mobility is limited and its resale value uncertain.

Pipelines are characterized by high fixed costs, namely, the costs associated with buying pipe and related facilities and initial construction. Whether these costs are also sunk costs is an open question that requires additional investigation. Some considerations can provide insight. For small pipeline systems, such as gathering lines, it is relatively easy to reuse the pipe for other gathering systems. The gathering pipelines usually are not buried, or if they are buried, it is in shallow ditches. Thus, the salvage value is high. For larger systems, the salvage value is highly uncertain. It may be impossible to take the pipe out of the ground because of the enormous expense involved or because of environmental or other reasons. The pipeline can be resold, however.

Additionally, the right-of-way may be valuable not only to other petroleum pipelines, but to other types of pipelines, such as natural gas or coal slurry. For these larger lines, there is relatively little experience in industry exit since, overwhelmingly, the lines remain in service. More data and investigation are required to answer this question and to determine whether the fixed costs associated with pipelines truly are sunk costs and whether exit is relatively costly or costless.

Entry conditions, therefore, may pose a barrier in some instances, but generally it may be concluded that the barriers are not substantial nor insurmountable. High concentration ratios, therefore, are less of a problem because of the relative ease with which other companies can enter the industry, and perhaps exit the industry.

Finally, a last consideration is the incentive to keep pipelines utilized. While operating costs of a pipeline are relatively low, at some point of utilization the unit cost of throughput starts to increase dramatically. In large diameter pipelines this point is at about 50 percent of utilization.[160] Therefore, these pipelines have an incentive to use at least 50 percent of their capacity; otherwise, unit costs become substantial and impose severe transportation penalties. In times of weak demand this means that rivalry among pipelines for volume increases. Logically, pipelines would have few or no incentives to increase prices to a monopoly level since this may drive away potential users of the line. The demand for pipeline services relative to pipeline capacity therefore becomes an important factor in keeping pipeline rates competitive.

In high demand periods, other factors come into play. If the pipeline is full and deregulated, the pipeline rates may rise as a method of

allocating space. With regulation, space is prorated while rates remain the same. It is more efficient to permit price to be the allocator of space, since that method will account for all costs, including opportunity costs.

D. Common Carrier Issues

The previous section indicated that market forces can ensure competitive rates and reasonable rates of return in a deregulated environment; however, other parts of the Interstate Commerce Act may embroil FERC in similar rate regulation. As a result, it is necessary to eliminate the applicability of those provisions to petroleum pipelines. A simple method for accomplishing this result is to delete petroleum pipelines from the common carrier requirements of ICA. The following are indicative of some of the problems if common carrier requirements are continued.

The antirebate provisions of ICA prohibit a pipeline from paying one shipper to use the pipeline without also paying other shippers.[161] These provisions created a problem for a pipeline owned by an oil company also shipping in the pipeline, if the shipper-owner received a dividend as a return on its investment. The question raised is, are dividends rebates?[162] The U.S. charged in a series of cases filed on September 30, 1940, that dividends paid to shipper-owners were rebates and violated the Elkins Act.[163] Due to the exigencies of World War II, the cases were settled on December 23, 1941, through a consent decree that permitted pipelines to pay a dividend of 7 percent on the valuation of the pipeline. The settlement of these Elkins Act cases became known as the Elkins Act Consent Decree, or just the Consent Decree.[164]

The Consent Decree has provided an upper limit on rate of return for pipelines, but it also has provided an incentive to alter the capital

structure for pipelines so that they use small proportions of equity and high proportions of debt. This skewing of the capital structure occurs because the valuation methodology upon which the dividend limitation is based allows for recovery of interest expenses separate from the normal recovery through the allowed percentage rate of return.[165] As a result, many pipeline stock companies have only 10 percent equity and 90 percent debt.

Recently, the Department of Justice has moved to vacate the Consent Decree.[166] If the Consent Decree is vacated, what is the status of dividends paid by the pipeline to shipper-owners? Do they become rebates subject to the prohibitions of the Elkins Act? The Department of Justice has taken the following position:

> The theory of the complaint [Elkins Act cases] was that any dividend or other payment made by a pipeline company to a shipper-owner not equally available to a non-owner-shipper constituted an unlawful rebate. This theory, however, is not consistent with the requirement that the owners of a regulated private business are entitled to fair compensation for the use of their assets employed in the venture. See, e. g., Federal Power Commission v. Hope Natural Gas Co., 320 U. S. 591, 603 (1944) ("Hope"). Under the Interstate Commerce Act and other federal regulatory statutes, regulated enterprises are entitled to charge "just and reasonable" rates, see, e. g., 49 U.S.C. § 1(5), and these have been defined by the Supreme Court to be rates which will yield sufficient revenue to cover both operating expenses and the "capital costs of the business", including "service on the debt and dividends on the stock". Id. Thus, if revenues are lawfully collected under Section 1(5) of the Interstate Commerce Act. 49 U.S.C. § 1(5), dividends paid from those revenues would pass muster under the Elkins Act, even if paid to shipper-owners.[167]

Thus, in a regulated environment, dividends which fell within the permissible returns on investment established by Hope would not be considered rebates and would not violate the Elkins Act.

Would this logic apply to a deregulated environment? There is no rational reason why it should not. The complication, of course, is that what may be considered a reasonable return in deregulated industry may not be considered reasonable in a regulated industry. There is a substantial potential that FERC may become embroiled in the same types of issues that are now before it in Williams and TAPS if nonowner-shippers complain to FERC that the dividends paid by pipelines to shipper-owners appear unreasonable.

Another question related to continuing common carrier requirements is whether other words in ICA would provide a mechanism for challenging monopolistic rate practices in a deregulated environment. For example, do the terms undue or unreasonable preference, advantage, prejudice, or discrimination provide a method of challenging unreasonably high rates?[168]

The discrimination term has been used to mean charging one shipper a higher rate for similar shipments to the same destination.[169] ICC has found with respect to a challenge by nonowner-shippers alleging that the payment of dividends to owner-shippers was an unjust discrimination and undue prejudice, that a dividend payment that fell within ICC's determination of reasonableness will remove any unjust discrimination and undue prejudice.[170] This seems to imply that rates yielding returns above ICC's determination of reasonableness would be unjustly discriminatory or unduly prejudicial.

These examples demonstrate that maintaining their applicability to petroleum pipelines would create new regulatory burdens on FERC.

E. Regulation of Trans Alaska Pipeline System

The previous sections indicated that competition in the petroleum pipeline industry justifies deregulation. The sweep of this conclusion must be tempered concerning TAPS. Market forces are not sufficient to sustain competitively determined rates. Therefore, TAPS should remain subject to regulation.

TAPS is the only transportation system from the North Slope of Alaska to Valdez, located in Southern Alaska, where ocean tankers can transport the crude oil elsewhere. It is owned in an undivided interest basis by eight major oil companies, namely, Amerada Hess, Arco, BP, Exxon, Mobil, Phillips, Sohio, and Union.[171] Three of the eight, Arco, BP/Sohio, and Exxon, which own about 90 percent of the pipeline, also are the largest owners of the Prudhoe Bay Field on the North Slope.

TAPS should not be deregulated because competition will not reduce or eliminate the monopoly power inherent in the pipeline. The owners can adversely affect many interests, including independent crude oil producers, nonowner-shippers, the State of Alaska, and the nation.

One argument raised by the owners of TAPS is that because it is operated as an undivided interest line, with eight separate tariffs, it functions as if eight separate lines existed within one physical facility. This is true to some extent. In times of slack demand, there may be intense rivalry among the eight owners to fill each's portion of the line. One example of differences among the eight occurred when tariffs were filed initially, the rates for transportation ranged from a low of $6.04 to a high $6.44. This range has been extended to a low of $5.30 because Exxon had to lower its tariff due to Consent Decree limitations.

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There are several considerations, however, that mitigate this rivalry. First, the three principal owners of TAPS are also the principal owners of the Prudhoe Bay Field, and other areas on the North Slope. The incentives of these owners appear to be to maintain higher transportation rates and lower wellhead prices due primarily to the tax structure. They maximize their profits through higher transportation rates. As a result, profit maximization may override the incentives to compete for transportation services. Second, in a tight market the rivalry among the eight owners is likely to disappear since TAPS is the only method of transporting the crude and the pipeline will be full anyway. In the tight market situation the monopoly power of the pipeline could be used to set rates above a competitive level. This is a very real possibility that puts TAPS into a special category.

The interests of crude oil producers, shippers, the State of Alaska, and the nation are involved. High transportation rates will mean lower wellhead prices, since the markets within which Alaskan crude is sold can be considered competitive, preventing the passthrough of high transportation costs. The high transportation costs, instead, will translate into lower netbacks at the wellhead. Since TAPS' tariffs are a large part of the wellhead price, about 20 percent, the wellhead impact can be substantial. Lower wellhead prices affect incentives to explore for and develop oil. Not only is there the interest of crude oil producers but a substantial national interest in maintaining incentives for North Slope exploration and development in order to reduce imports. Undiscovered petroleum resources in Northern Alaska may be substantial particularly in Beaufort and Chuckchi Sea regions. The U. S. Geological Survey's current mean

estimate of undiscovered recoverable reserves in Northern Alaska, both offshore and onshore is 15.2 billion barrels, more than six times the cumulative production to date in Northern Alaska.[172] As a result, Northern Alaska has excellent prospects for future oil development under existing and proposed outer continental shelf lease sales. The Naval Petroleum Reserve in Alaska is one such prospective area which may be adversely affected as bids for leases may be low reflecting the bidder's high cost that must be paid for using the pipeline. Alternatively, little or no interest may be shown in these federal lease sales, except by pipeline owners.

Nonowner-shippers, which can be considered consumers of transportation, are affected by changing tariffs. They are better off as rates go down and worse off as rates go up. For them, the rate is the real cost of transportation, since there is no dividend to lower the nominal tariff rate. Owners complain that nonowner-shippers are free-riders, that is, they make no investment but have all the rights of owners since the pipeline is a common carrier. While the free-rider complaint is real, owner-shippers are compensated in the form of a reasonable return on investment. Anything above a reasonable level is overcompensation. In this instance, the free-rider complaint disappears. Therefore, the market power inherent in the pipeline must be reduced to the level of producing reasonable rates; otherwise, nonowner-shippers will be disadvantaged. Furthermore, the pipeline is a common carrier which requires that all shippers be treated in a nondiscriminatory manner. While the owners of the pipeline have stated that they are quite willing to sell a portion of the pipeline, nonowners should not be required to buy into the pipeline in order to ship. Shipping

without ownership is part and parcel of the common carrier requirements of pipelines, which receive public benefits in the form of eminent domain as a quid pro quo.

The State of Alaska has an interest in the price of oil at the wellhead since it derives a 12.5 percent royalty based on that price. This is a substantial interest even though it may be derived directly from producers and indirectly from the federal government.[173] But this is the way the royalty system has worked ever since its inception and there does not appear to be a good reason to single out Alaska for different treatment.

One final argument made by the TAPS owners is that if TAPS is singled out and not deregulated exceptions can be made for other pipelines into other frontier areas. This could create a chilling effect on the private construction of new projects. Federal government involvement may become necessary. This is unlikely to happen. Oil companies have assumed great risks in other times of uncertainty in order to exploit crude oil resources. New pipelines currently are being built into frontier areas even with the present uncertainty over rates. Therefore, as long as rate regulation is reasonable, there should be no inhibitions or disincentives to build new pipelines.

Also, it must be noted that new pipeline entry is unlikely. The cost to build a new pipeline may exceed $30 billion (based on the estimate to build the Alaskan portion of the Alaska Natural Gas Transportation System). Permitting problems are likely to be encountered, either delaying or precluding another pipeline. Even expansion of TAPS beyond the ultimate 2 million BPD capacity is difficult and costly and is controlled by present owners (capacity expansion requires approval of 51 percent of the ownership).

In summary, TAPS should not be deregulated. Market forces are inadequate to reduce the monopoly power of the pipeline. Regulation must remain in order to protect the various interests involved.

F. Other Cases

In any deregulation scenario there always will be the special case that will be pointed to to indicate why deregulation should not be implemented. Rather than trying to speculate about which pipeline may be a special case, it would be preferable to deregulate all pipelines except TAPS, but at the same time provide a mechanism whereby a pipeline that does abuse its monopoly power can become subject to regulation again. What is required is a clear-cut statement in the deregulation law that aggrieved persons can initiate a proceeding before FERC to reinstitute regulation based on an abuse of monopoly power. These proceedings should be quite few in number, since they would be limited to situations where monopoly power and resulting economic distortion is pervasive.

The form of regulation chosen should not rely upon the traditional approach using the concept of just and reasonable rates. Relying upon this traditional public utility type approach would require the same analysis now occurring in the Williams and TAPS proceedings and would not resolve the problems FERC now faces in those proceedings. Rather, the complainant would have the burden of showing that the rate is excessive, that is, that the rates charged were above normal competitive rates due to inadequate competition based upon a showing that market forces were insufficient to induce a competitive rate. Therefore, the test developed by FERC would be a market-based test comparing the pipeline in question to similar pipelines that were subject to competition. If the complainant's burden was met, the

pipeline could rebut the evidence by showing that special circumstances warranted the higher rates. Such circumstances could include higher risk, unusual construction problems, unusual environmental problems, and other factors. This market-based test undoubtedly would create its own set of problems, but at least it would depart from the public utility type of regulation and introduce more flexibility into the regulation process.

In the FERC proceeding, the burden would be on the complainants to make an affirmative showing that the pipeline should be subject to regulation. Placing a meaningful burden on complainants should reduce frivolous complaints, since the pipeline could continue to charge its deregulated rates until ordered to do otherwise. An evidentiary hearing would permit a full airing of views and provide the appropriate process to determine the validity of the complaint. In this way, special cases can be dealt with without trying to make a prior determination about which pipeline should be treated as a special case.

V. CONCLUSION

The analysis leads to the conclusion that in most situations the ability of petroleum pipelines to exert monopoly or monopsony power is circumscribed. Structurally, pipeline concentration is high, however, in many instances this concentrated structure is undermined by the existence of waterborne, and in some instances, truck transportation. Entry, on the other hand, is relatively easy, further limiting the ability of a pipeline to exert any monopoly or monopsony power. Finally, competition in end-use markets will limit the ability of pipelines to pass along excessive rates. The general conclusion, therefore, is that deregulation of petroleum pipelines should be pursued, except for TAPS.

TABLE I

CRUDE PIPELINE CORRIDORS - 1979

Company Rank / Corridor	Alaska	Capacity[1]	CR	Wyoming West	Capacity	CR	Wyoming East	Capacity	CR
1.	Trans Alaska Pipeline System	1210	100	Chevron	110	71.90	Platte	150	58.37
2.				Amoco	43	22.10	Amoco	107	41.63
3.									
4.									
CR 4		1210	100		153		100	257	100
5.									
6.									
7.									
8.									
CR 8									

1 All capacity in thousand barrels per day.

TABLE I--Continued

CRUDE PIPELINE CORRIDORS - 1979

Company Rank \ Corridor	Texas to Cushing, OK	Capacity	CR	Cushing, OK North	Capacity	CR	Gulf Coast Upper Mid-Continent	Capacity	CR
1.	Texoma	400	21.76	Ozark	322	19.71	Capline	1209	73.36
2.	Basin	394	21.44	Cushing-Chicago	295	18.05	Mid-Valley	277	16.81
3.	Seaway	314	17.08	Osage	280	17.14	Mobil	162	9.83
4.	Amoco	285	15.51	Amoco	260	15.91			
CR 4		1393	75.79		1157	70.80		1648	100
5.	Arco	160	8.71	Texas-Cities Service	137	8.38			
6.	Amoco	135	7.34	Williams	106	6.49			
7.	Texaco-Cities Service	61	3.32	Phillips	91	5.57			
8.	Shell	46	2.50	Continental	72	4.41			
CR 8		1979	97.66		1563	95.65			
Others	Continental	25		Shell	39				
	Texaco-Cities Service	18		Texaco-Cities Service	32				
		1838			1634				

TABLE I--Continued

CRUDE PIPELINE CORRIDORS - 1979

Company Rank / Corridor	Gulf Coast to Upper MidContinent	Capacity	CR
1.	Capline	1209	27.80
2.	Chicago	490	11.27
3.	Texoma	400	9.20
4.	Ozark	322	7.40
CR 4		2421	55.67
5.	Seaway	314	7.22
6.	Cushing-Chicago	295	6.78
7.	Mid-Valley	277	6.37
8.	Amoco	260	5.98
CR 8		3567	82.02
Others	Woodpat	251	
	Mobil	162	
	Texaco-Cities Service	161	
	Texaco-Cities Service	137	
	Shell	39	
	Texaco-Cities Service	32	
		4349	

TABLE I--Continued

CRUDE PIPELINE CORRIDORS - 1979

Company Rank / Corridor	Upper MidContinent	Capacity	CR	Upper MidContinent	Capacity	CR	West Texas	Capacity	CR
1.	Lakehead	740	17.56	Lakehead	740	23.75	Basin	347	20.29
2.	Lakehead	710	16.85	Chicap	490	15.73	West Texas Gulf	335	19.90
3.	Chicap	490	11.63	Marathon	336	10.78	Mesa	316	18.48
4.	Marathon	336	7.98	Marathon-Mid-Valley	302	9.69	Mobil	250	14.62
CR 4		2276	54.02		1868	59.95		1148	67.13
5.	Marathon	315	7.48	Woodpat	251	8.06	Arco	170	9.94
6.	Marathon-Mid-Valley	302	7.17	Marathon	174	5.58	Phillips	98	5.73
7.	Woodpat	251	5.96	Texaco-Cities Service	161	5.17	Texas	65	3.80
8.	Marathon	174	4.13	Tecumseh	117	3.75	Phillips	63	3.68
CR 8		3318	78.36		2571	82.51		1644	96.14
Others	Texaco-Cities Service	161		Texas	104				
	Tecumseh	117					Exxon	38	
	Texas	104					Shell	28	
	Texas	89		Texas	89				
	Buckeye	87		Buckeye	87			1710	
	Marathon	72							
	Marathon	60		Marathon	60				
	Marathon	48		Marathon	48				
	Sohio	47		Sohio	47				
	Pure	35		Pure	35				
	Sohio	25		Sohio	25				
	Texas	25		Texas	25				
	Marathon	17		Marathon	17				
	Marathon	8		Marathon	8				
		4213			3116				

TABLE I--Continued

CRUDE PIPELINE CORRIDORS - 1979

Company Rank / Corridor	West Texas to TX Gulf	Capacity	CR	East Texas & LA to TX Gulf	Capacity	CR	All Texas & LA to TX Gulf	Capacity	CR
1.	Rancho	385	61.11	Texas	360	56.34	Rancho	385	12.92
2.	Exxon	130	20.63	East Texas Main Line	63	9.86	Texas	360	12.08
3.	Texas-New Mexico	68	10.79	Mobil	61	9.55	Basin	347	11.65
4.	Amdel	47	7.46	Pure	50	7.82	West Texas Gulf	335	11.25
CR 4		630	100		534	83.57		1427	47.90
5.				Shell	45	7.04	Mesa	316	10.61
6.				Black Lake	32	5.01	Mobil	250	8.39
7.				Neale	28	4.38	Arco	170	5.71
8.							Exxon	130	4.36
CR 8					639	100		2293	76.97
Others							Phillips	98	
							Texas-New Mexico	68	
							Texas	65	
							Phillips	63	
							East Texas Main Line	63	
							Mobil	61	
							Pure	50	
							Amdel	47	
							Shell	45	
							Exxon	38	
							Black Lake	32	
							Shell	28	
							Neale	28	
								2979	

TABLE II

PRODUCT PIPELINE CORRIDORS - 1979

Company Rank \ Corridor	Gulf Coast-South & Northeast	Capacity[1]	CR	Linden-Philadelphia Delaware-west	Capacity	CR
1.	Colonial	1908	81.36	Buckeye	321	42.46
2.	Plantation	437	18.64	Laurel	180	23.81
3.				Arco	134	17.72
4.				Mobil	74	9.79
CR 4		2345	100		709	93.78
5.				Sun	36	4.76
6.				Getty	11	1.46
7.						
8.						
CR 8					756	100

1 All capacity in thousand barrels per day.

TABLE II--Continued

PRODUCT PIPELINE CORRIDORS - 1979

Company Rank / Corridor	Texas Gulf Coast-north	Capacity	CR	Cushing-north & west	Capacity	CR
1.	Explorer	380	41.53	Williams	248	38.39
2.	Texas Eastern Transmission	300	32.79	Phillips	131	20.28
3.	Mobil	95	10.38	Kaneb	93	14.40
4.	Gulf	48	5.25	Chase	49	7.59
CR 4		823	89.95		521	80.65
5.	Arco	47	5.14	Cherokee	28	4.33
6.	Exxon	28	3.06	Mobil	27	4.18
7.	Mobil	17	1.86	Arco	25	3.87
8.				Amoco	23	3.56
CR 8		915	100		624	96.59
Others				Getty	12	1.86
				Texaco-Cities Service	10	1.55
					646	100

TABLE II--Continued

PRODUCT PIPELINE CORRIDORS - 1979

Company Rank \ Corridor	Cushing-north & east	Capacity	CR	Upper Great Plains	Capacity	CR	West Slope Cascades	Capacity	CR
1.	Explorer	290	59.06	Chevron	64	51.61	Olympic	170	100
2.	Phillips	105	21.38	Yellowstone	60	48.39			
3.	Cherokee	73	14.87						
4.	Williams	23	4.68						
CR 4		491	100		124	100		170	100

TABLE II--Continued

PRODUCT PIPELINE CORRIDORS - 1979

Company Rank \ Corridor	California	Capacity	CR
1.	Four Corners	288	36.59
2.	Southern Pacific (LA)	247	31.39
3.	Southern Pacific (Richmond)	77	9.78
4.	San Diego	75	9.53
CR 4		687	87.29
5.	Calnev	70	8.89
6.	Southern Pacific (Bakersfield)	30	3.81
		787	100

Footnotes

1. Two major proceedings involving petroleum pipelines are now pending, Williams Pipeline and Trans Alaska Pipeline System. Both will be discussed infra.

2. National Petroleum Council, Petroleum Storage and Transportation Capacities, Petroleum Pipeline. Vol. III, 4 (1979). (Hereinafter cited as "NPC.")

3. Id.

4. Petroleum pipelines normally are considered common carriers due to their inclusion within the coverage of the Interstate Commerce Act (ICA), discussed infra. Private carriers do not fall within ICA coverage. See NPC 3 for estimate on private carrier mileage.

5. Gathering lines exist in crude oil producing fields, usually range in size from two to eight inches, and carry crude from small lease tanks at the wellhead to central areas, large tanks or tank farms, for pumping into larger crude trunk lines.

6. NPC C-1.

7. Crude pipelines are divided between trunk lines--long distance transporters from crude producing fields to refineries, and gathering lines, see, supra note 5. For more detail, see L. Coburn, United States Petroleum Pipelines: An Empirical Analysis of Pipeline Sizing, Appendix II (1980). (Hereinafter cited as "Coburn.")

8. Refined product pipelines move light refined products--gasolines, aviation fuels, distillates--from refineries to terminals located in or near consumption markets. Coburn II-5-II-7.

9. Liquid petroleum gases (LPG) and natural gas liquids (NGL) pipelines move natural gas products from field gas plants or fractionation facilities to refineries or distribution terminals. LPG pipelines batch ethanes, propanes, butanes, and natural gasolines to distribution terminals or refineries. NGL pipelines move natural gases from field separation plants to a central fractionation plant where ethanes, propanes, butanes, and natural gasolines are separated. NPC E-1.

10. Id. at 4.

11. Coburn Appendix II.

12. Id.

13. Id. at xi. Some care must be taken in how the barrel-mile number is derived because pipeline capacities can vary substantially over the length of a line due to changes in pipeline diameter. A simple capacity-length calculation will be misleading if diameter changes are substantial. Therefore, more accuracy will be achieved by dividing a pipeline system into segments with varying capacities and lengths.

14. Id. at Appendix I.

15. Id. at Appendix II contains a short, but complete description of how pipelines operate. Essentially, the liquid is pushed through the pipeline by increasing the pressure on the liquid using pumps spaced along the pipeline. While the direction of flow can be reversed, operational adjustments are necessary which require time.

16. Congressional Research Service, National Energy Transportation, Vol. I, Current Systems and Movements, Pub. No. 95-15, Senate Comm. on Energy and Natural Resources and Senate Comm. on Commerce, Science, and Transportation, 95th Cong., 1st Sess., 1977.

17. Refineries located in coastal areas receive crude by both pipeline and water (tankers and barges). On the East Coast, for example, of domestic receipts of crude oil, about 34 percent arrived by pipeline and about 55 percent arrived by water. Of foreign crude oil receipts on the East Coast (foreign receipts overwhelmed domestic receipts by a factor of eight), 5 percent arrived by pipeline while 95 percent arrived by tanker or barge. On the Gulf Coast, of domestic receipts of crude oil, 80 percent arrived by pipeline and 17 percent by tanker and barge; of foreign receipts (foreign receipts represented only 41 percent of combined receipts), 4 percent were pipeline deliveries and 96 percent were water deliveries. In the landlocked areas of the Midwest and Great Plains, the deliveries are almost entirely by pipeline. In the Midwest, for example, of domestic receipts of crude oil, 97 percent arrived by pipeline, and only 1 percent arrived by barge or tanker; of foreign receipts, 96 percent arrived by pipeline and 4 percent arrived by barge or tanker (foreign receipts constituted about 37 percent of total refinery receipts). In the Great Plains the disparity is equally striking: of domestic receipts, 93 percent arrived by pipeline, and less than one percent arrived by tanker or barge; and of foreign receipts, all arrived by pipeline (foreign receipts constituted only 11 percent of refinery inputs). Lastly, on the West Coast, domestic crude is delivered more evenly, 50 percent by pipeline and 41 percent by tanker or barge, while for foreign crude only 10 percent arrived by pipeline and 90 percent arrived by tanker or barge (foreign receipts accounted for 36 percent of total receipts). Department of Energy, DOE/EIA 0108(80), Crude Petroleum, Petroleum Products, and Natural Gas Liquids: 1980 (Final Summary), Table 13 (1981).

18. Congressional Research Service, supra note 16.

19. Department of Energy, supra note 17, at Table 26.

20. Coburn, supra note 7.

21. In this study majors were identified as the largest 18 oil companies: Amerada Hess Corporation, Ashland Oil, Inc., Atlantic Richfield Company, Cities Service Company, Conoco, Inc., Exxon Corporation, Getty Oil Company, Gulf Oil Corporation, Marathon Oil Company, Mobil Oil Corporation, Phillips Petroleum Company, Shell Oil Company, Standard Oil Company of California, Standard Oil Company of Indiana, Standard Oil Company of Ohio, Sun Oil Company, Texaco, Inc., and Union Oil Company of California. Id. at 40-44, 59.

22. While DOE's study identified 147 pipeline systems, not all submitted data to DOE. A total of 92 companies submitted data, the additional 22 (92 + 22 = 114) were undivided interest systems included within the data of the 92 reporting companies. Id. at 40. Undivided interest pipelines are similar to joint venture pipelines, except that a separate stock company is not formed and each owner posts its own tariff for transportation through its share of the joint facility. Id. at VI-1-VI-11.

23. Id. at 40-44.

24. Staff of Subcomm. on Antitrust and Monopoly of the Senate Comm. on the Judiciary, 95th Cong., 2d Sess., Oil Company Ownership of Pipelines, 25 (Comm. Print 1978). (Hereinafter cited as "Senate Pipeline Report.")

25. Coburn III-1, Association of Oil Pipe Lines, Pipeline Transportation: A Review of the Oil Pipeline Industry, 3-4 (1976).

26. Senate Pipeline Report 25-26; Coburn III-3-6.

27. Senate Pipeline Report 26-27.

28. Id.

29. Id. at 99.

30. Id.

31. Id. at 99-102.

32. 34 Stat. 584 (1906); 49 U.S.C. 1.

33. Standard Oil Co. of N.J. v. United States, 221 U.S. 1 (1911). See also, E. Mitchell, ed., Vertical Integration in the Oil Industry, (1976) for an excellent discussion of the reintegration of the companies spun off as a result of this decree.

34. The Interstate Commerce Act was recodified without substantive change by Pub. L. 95-473 (Oct. 17, 1978), 92 Stat. 1337, 49 U.S.C. 10101 et seq. The recodification expressly provided that the previous codification or numeration would apply to oil pipeline matters. Revised Interstate Commerce Act, Pub. L. 95-473, section 4(c), 92 Stat. 1470 (1978). Jurisdiction over petroleum pipelines, however, was transferred to FERC in the Department of Energy Organization Act, on October 1, 1977. Pub. L. 95-91, section 402(b), 91 Stat. 584 (1977), 42 U.S.C. 7155, 7172(b).

35. 49 U.S.C. 1(5).

36. 49 U.S.C. 1(4).

37. Id.

38. Id.

39. 49 U.S.C. 15(1), (3), (6).

40. 49 U.S.C. 2 and 49 U.S.C. 41, 43.

41. 49 U.S.C. 3(1).

42. 49 U.S.C. 4(1).

43. 49 U.S.C. 6.

44. 49 U.S.C. 13(1), (2).

45. 49 U.S.C. 15(7).

46. See generally, W. Jones, Authority of the Department of Energy to Regulate Anticompetitive Aspects of Petroleum Pipeline Operations, (1978).

47. In the matter of Pipe Lines, 24 I.C.C. 1 (1912).

48. The Pipe Line Cases, 234 U.S. 548 (1914).

49. Id. at 560.

50. Id. at 562.

51. The Pipe Line Cases, 234 U.S. 548 (1914), and Valvoline Oil Co. v. United States, 308 U.S. 141 (1939).

52. The Pipe Line Cases, 234 U.S. 548 (1914).

53. Champlin Refining Co. v. United States, 329 U.S. 29 (1946), and United States v. Champlin Refining Co., 341 U.S. 290 (1951).

54. 49 U.S.C. 19a provides for valuation of carrier property. Valuation was used as the basis for ratesetting. For a description of the development of ICC's valuation procedures, see A. Johnson, Petroleum Pipelines and Public Policy, 1906-1959, 240-41, 391-95 (1967). For a recent treatment of the legal and economic implications of valuation, see P. Navarro and T. Stauffer, The Legal History and Economic Implications of Oil Pipeline Regulation, 2 Energy Law J. 291 (1981). (Hereinafter cited as "Navarro and Stauffer.")

55. Fair value ratemaking was disavowed in F.P.C. v. Hope Natural Gas Co., 320 U.S. 591 (1944), and specifically with reference to petroleum pipelines, see Farmers Union Central Exchange v. F.E.R.C., 584 F.2d 408 (D.C. Cir. 1978), cert. denied sub nom. Williams Pipe Line Co. v. F.E.R.C., 439 U.S. 995 (1978).

56. The Supreme Court's decision in Hope provided the criteria for a reasonable return for rate regulation purposes. Returns to capital are adequate if they are "commensurate with returns on investment in other enterprises having corresponding risks" and "assure confidence in the financial integrity of the enterprise, so as to . . . attract capital." Hope, 320 U.S. at 603. Prior methodologies used for determining reasonable returns were rejected because they were too arbitrary and did not permit a meaningful basis for comparing returns with reference to capital markets, the method chosen in Hope for ensuring meaningful returns.

57. Reduced Pipe Line Rates and Gathering Charges, 243 I.C.C. 115 (1940).

58. Id. at 139.

59. Id. at 142-44.

60. Id.

61. 243 I.C.C. 589 (1941).

62. Id. at 662.

63. Minnelusa Oil Corp. v. Continental Pipe Line Company, 258 I.C.C. 41 (1944).

64. Id. at 48.

65. Protests were filed against tentative ICC valuations of Williams Brothers Pipe Line Company, I.C.C. Valuation Dkt. No. 1423 (1971 Report), and against specific Williams' tariffs, I.C.C. Dkt. IS-9098. The only exception applied to rates on shipments of propane, see Pipeline Rates on Propane from Southwest to Midwest, 318 I.C.C. 615 (Div. 2 1962).

66. Petroleum Products, Williams Brothers Pipe Line Co., 351 I.C.C. 102 (Div. 2 1975), aff'd on reconsideration, 355 I.C.C. 479 (1976).

67. Id.

68. Farmers Union Central Exchange v. F.E.R.C., supra note 55.

69. Id. at 421.

70. F.E.R.C. Dkt. No. OR79-1.

71. F.E.R.C. Dkt. No. OR78-1.

72. 47 Foster Oil Pipeline Report 5 (November 1981).

73. Id. at 507, App. 1-15, summarizes the arguments of the major actors at the most recent oral argument held November 19, 1981. See text at note 68 for brief explanation of Farmers Union case.

74. Id.

75. Id.

76. For an excellent exegesis on these issues, see Navarro and Stauffer and P. Navarro, R. Petersen, and T. Stauffer, A Critical Comparison of Utility-Type Ratemaking Methodologies in Oil Pipeline Regulation, 12 Bell J. of Economics 392 (1981).

77. Trans Alaska Pipeline System (Rate Filing), 355 I.C.C. 80, aff'd sub nom. Mobil Alaska Pipeline Co. v. I.C.C., 557 F.2d 775 (5th Cir. 1977), aff'd sub nom. Trans Alaska Pipeline Rate Cases, 436 U.S. 631 (1978).

78. Trans-Alaska Pipeline System, Initial Decision Phase I Issues, February 1, 1980.

79. Id.

80. Senate Pipeline Report 59-63, and Standard Oil Co. of N.J. v. United States, 221 U.S. 1 (1911).

81. See legislative history leading to passage of Hepburn Act in Senate Pipeline Report 99-102.

82. This is an often cited justification for the imposition of regulation, see A. Kahn, The Economics of Regulation: Principles and Institutions, Vol. 1 "Economic Principles," 1-19 (1970), and C. Phillips, The Economics of Regulation, chap. 2 (1969).

83. Coburn 15-16, and E. Mitchell, ed., Oil Pipelines and Public Policy, 3-12 (1979).

84. Coburn 11-26 and sources cited therein.

85. Department of Justice, Report of the Attorney General, pursuant to Section 7 of the Deepwater Port Act of 1974 on the Applications LOOP, Inc. and Seadock, Inc. for deepwater port licenses, (November 5, 1976), Department of Justice, Report of the Attorney General, pursuant to Section 19 of the Alaska Natural Gas Transportation Act of 1976, (July 1977), Department of Justice, Report of the Antitrust Division on the Competitive Implications of the Ownership and Operations by Standard Oil Company of Ohio of a Long Beach, California-Midland, Texas Crude Oil Pipeline, (June 1978), and Department of Justice, Antitrust Advice on the License Application of the Texas Deepwater Port Authority, (July 1979).

86. Coburn.

87. See Kahn, and Phillips, supra note 82.

88. See Section IV.c. infra.

89. F. Scherer, Industrial Market Structure and Economic Performance, chap. 2 (2d ed. 1980).

90. Comparative transportation costs are:

	Cost/100 barrel-miles
Truck	$0.51 -- $0.75
Rail	0.115 -- 0.60
Barge	0.04 -- 0.15
Pipeline	0.025 -- 0.12
Tanker	0.01 -- 0.06

Sources are Association of Oil Pipelines, supra note 25, and G. Wolbert, Jr., U. S. Oil Pipe Lines, Appendix A, 481 (1979).

91. J. Piercey, The Pipeline Segment of the Domestic Petroleum Industry: Structure and Conduct, 112 (1978) (Ph.D. Dissertation, University of Oklahoma), estimates 1975 average expense per 1000 barrel-miles is $0.34 for crude and $0.38 for product, while 1975 average revenue per 1000 barrel-miles is $0.60 for crude and $0.71 for product.

92. Crude Oil Windfall Profit Tax Act of 1980, Pub. L. 96-223, Apr. 2, 1980, 94 Stat. 229, 26 U.S.C. 4986 et seq.

93. 94 Stat. 249, 26 U.S.C. 4996.

94. Atlantic Richfield Co., Exxon Corporation, and Standard Oil Company (Ohio) in conjunction with BP, Ltd. are the largest owners of both the pipeline and the producing fields.

95. See Trans-Alaska Pipeline System, Initial Decision Phase I Issues, February 1, 1980.

96. Revenue for 1979 obtained from Oil & Gas Journal, Aug. 11, 1980, at 86. TAPS revenue derived by multiplying 1979 TAPS capacity of 1,210 MM BPD from EIA data, by the weighted average tariff of $6.20 per barrel from TAPS Initial Decision.

97. EIA data indicate about 7,118,444,000 barrels carried in 1979, Department of Energy, DOE/EIA-0108(79), Crude Petroleum, Petroleum Products, and Natural Gas Liquids: 1979 (Final Summary), Tables 13 and 28 (1980). Also, there are 42 gallons to the barrel.

98. In the competitive model, the firm produces the maximum output for the least cost (price equals long run marginal cost). Regulation attempts to replicate the competitive model so that resources are allocated in the most efficient way. If regulation is lifted and pipelines can exert some monopoly power, the equilibrium established in the competitive model is upset and the firm is able to reduce output and raise its price (price exceeds long run marginal cost). In this process, the firm earns something more than it should if it were producing at the maximum level under the competitive model. The extra earnings are an economic rent. But when the firm earns this rent it does not obtain the full amount between the monopoly price-output combination and the competitive price-output combination. Some value to society is lost along the way, called a deadweight loss. Scherer, supra note 89, at 16-18.

99. The assumptions used to derive this figure are: transportation costs increase by $0.50/bbl, total pipeline movements are 7,118 million barrels, crude price is $35/bbl and elasticity of final demand is 0.5. The elasticity of demand number is a good approximation based upon the range identified in T. Morian, D. Skelly, and A. Reznek, Price Elasticities of Demand for Motor Gasoline and Other Petroleum Products, (1981). A recent article indicated that a $24 million deadweight loss is reason for concern, W. Landes and R. Posner, Market Power in Antitrust Cases, 94 Harv. L. Rev. 937, 954 (1981).

100. Throughput-unit cost relationships depend upon pipeline size. Unit cost increases are much more dramatic for pipelines less than 24 inches in diameter; while pipelines with diameters of 24 inches or more unit costs are quite insensitive through a broad range of volumes up to about 50 percent of capacity. After that unit costs increase dramatically. Coburn 143, and Wolbert, supra note 90, at 496.

101. For a comprehensive discussion of Texas crude production, see Staff of the Subcomm. on Monopolies and Commercial Law of the House Comm. on the Judiciary, 96th Cong., 1st Sess., Interdependence in Domestic Crude Oil: Joint Ventures, Farm Outs, Exchanges, and Gathering Lines, (Comm. Print 1979).

102. The rationale for this assertion is that FERC closely regulates the rates of each gas pipeline company. A tight regulatory approach to oil pipelines would require similar costs.

103. Conversation with Robert E. Anderson, Deputy Director, Office of Regulatory Analysis, FERC.

104. Id.

105. C. Studness, "Third-Quarter Electric Utility Financial Results," Public Utilities Fortnightly, December 17, 1981, at 47-48, and Department of Energy, DOE's Role in Restoring the Financial Health of the Electric Utility Industry, September 29, 1981 (Working paper).

106. Speech by James B. Edwards, Seminar on Utility Finances before the U. S. National Committee of the World Energy Conf. and the Edison Electric Institute, Oct. 28, 1981.

107. ICA requires jurisdictional pipelines to provide services on a common carrier basis. Therefore, once a pipeline is built nonowners can require the pipeline to provide space in the line even if it is full by forcing the line to prorate space. Owners view these shippers as freeriders since the shippers do not have to invest anything to obtain space in the line.

108. Scherer, supra note 89.

109. Id.

110. The delineation of a product market is relatively straightforward. Transportation is what is under consideration and nothing substitutes for it, unlike the electric power industry where transportation of fuel may be substituted by transmission of electric power.

111. See relative transportation costs, supra note 90, and Association of Oil Pipe Lines, Shifts in Petroleum Transportation, (September 1981).

112. See supra note 111.

113. M. Piette, The U. S. Petroleum Pipeline Industry: A Study of Vertical Integration, (1977) (Ph.D. Dissertation, Florida State Univ.).

114. Piercey, supra note 91.

115. J. Hansen, Competitive Aspects of the United States Petroleum Pipeline Industry: Implications for Regulatory Policy, 65-66, (1980) (Ph.D. Dissertation, Yale Univ.) (Hereinafter cited as: "Hansen.").

116. Id.

117. Coburn, supra note 7.

118. Id.

119. Crude purchasing essentially is an international market. The price of crude paid to producers in the Yates Field in Texas, for example, in part is determined by the price of crude in Saudi Arabia. Moreover, crude buyers can substitute crude from one part of the world with crude from another, with some crude specification limitations. While a rigorous shipments analysis has not been undertaken, a quick perusal of available data indicates that neither Texas nor Louisiana, the two largest crude producing states, can be considered discrete geographic markets. See Department of Energy, supra note 97 for data, and G. Werden, The Use and Misuse of Shipments Data in Defining Geographic Markets, 26 Antitrust Bulletin 719 (1981), and K. Elzinga, Defining Geographic Market Boundaries, 26 Antitrust Bulletin, 739 (1981) for a discussion of the shipments data approach to geographic definition.

120. Staff of the Subcomm. on Monopolies and Commercial Law of the House Comm. on the Judiciary, supra note 101, at 34.

121. Id.

122. The 39 markets in order of size are: 1. Port Arthur, Tex.-Lake Charles, La.; 2. Houston-Texas City, Tex.; 3. Los Angeles, Cal.; 4. Chicago, Ill.-Hammond, Ind.; 5. Philadelphia, Pa.; 6. Richmond, Cal.; 7. Baton Rouge, La.; 8. New Orleans, La.; 9. St. Louis, Mo.; 10. Corpus Christi, Tex.; 11. Linden, N.J.; 12. Ferndale, Wash.; 13. Southwest, Ind.-Southeast, Ill.; 14. Toledo, Ohio; 15. Pascagoula, Miss.; 16. Ponca City, Okla.; 17. Kansas City, Mo.; 18. Cushing-Tulsa, Okla.; 19. Wichita, Kan.; 20. St. Paul, Minn.; 21. Bakersfield, Cal.; 22. Amarillo, Tex.; 23. Lima, Ohio; 24. Midland-Odessa, Tex.; 25. Salt Lake City, Utah; 26. Delaware City, Del.; 27. Billings, Mont.; 28. Catlettsburg, Ky.; 29. Buffalo, N.Y.; 30. El Paso, Tex.; 31. Casper, Wyo.; 32. Wrenshall, Minn.-Superior, Wis.; 33. Detroit, Mich.; 34. Shreveport, La.; 35. Warren, Pa.; 36. El Dorado, Ark.; 37. Canton, Ohio; 38. McPherson, Kan.; 39. Denver, Colo. These 39 refinery markets represented 98 percent of 1977 Continental U.S. refinery capacity. Hansen 79-83.

123. Eighteen of the 39 were considered to lie on major waterways, namely 1-12, 14, 15, 26, 29, 32, and 33. The 18 account for about 78 percent of 1977 refinery capacity of the 39 markets. Hansen 79-84.

124. Id. at 88.

125. The DOE/EIA data that forms the basis of the Coburn study are available for this purpose.

126. In 34 of 39 markets data are available. Those markets where data are not available are: Los Angeles, Cal.; Richmond, Cal.; Bakersfield, Cal.; Shreveport, La.; and El Dorado, Ark.

127. The five markets that do not receive crude by water or receive only negligible amounts are: 4 (negligible), 9, 14, 32, and 33, Department of Energy, supra note 97, Table 13.

128. Hansen accounted for ownership in computing concentration ratios. If that were done in this paper, concentration would increase.

129. Hansen 89.

130. Id. at 96. Hansen referred to the pipelines' power in terms of monopsony since he viewed them as receivers or buyers of product. Strictly speaking, however, the pipelines do not buy the product but sell transportation. Therefore, it may be more accurate to use the term monopoly power.

131. Using DOE's data, no pipelines distributing from the market were found in three markets: Catlettsburg, Ky.; Wrenshall, Minn.-Superior, Wis.; and Warren, Pa.

132. These corridors are not the same ones identified in DOE's study since that study was examining a different phenomenon, namely capacity utilization.

133. Association of Oil Pipe Lines, Shifts in Petroleum Transportation, (September 1981).

134. Department of Energy, supra note 97, Tables 26 and 27.

135. Association of Oil Pipe Lines, supra note 133.

136. See discussion in note 130.

137. Hansen 96-98.

138. J. Delaney, R. Fenili, and H. Field, The State of Competition in Gasoline Marketing (1981).

139. Scherer, supra note 89.

140. Id. at 11, 236.

141. Trans-Alaska Pipeline Authorization Act, Pub. L. 93-153, Nov. 16, 1973, 87 Stat. 584, 43 U.S.C. 1651 et seq.

142. J. Bain, Industrial Organization, 1968; J. Ferguson, Advertising and Competition: Theory, Measurement, Fact, 1974; G. Stigler, The Organization of Industry, 1968.

143. H. Demsetz, Barriers to Entry, 72 American Econ. Rev. 47 (1982).

144. Id.

145. At least 22 states have laws relating to eminent domain and/or common carrier responsibilities of pipelines: Arizona, Arkansas, California, Colorado, Indiana, Kansas, Kentucky, Louisiana, Michigan, Montana, Nebraska, Nevada, New Mexico, New York, Ohio, Oklahoma, Pennsylvania, South Dakota, Tennessee, Texas, West Virginia, and Wyoming. A. Johnson, Petroleum Pipelines and Public Policy, 1906-1959, 21, 189 (1967). See also W. Beard, Regulation of Pipe Lines as Common Carriers, 39-42 (1941).

146. Colonial Pipeline's problems in securing rights-of-way in Pennsylvania are an example. G. Wolbert, Jr., U.S. Oil Pipe Lines, 123 (1979).

147. During World War II two pipelines encountered difficulty in obtaining rights-of-way. Congress enacted the Cole Act, 55 Stat. 610, 15 U.S.C. note prec. 715, July 1, 1941, which enabled interstate pipelines to exercise the right of eminent domain when the President determined that such action was in the interest of national defense. This solved the pipelines' problem. Id. at 20.

148. 30 U.S.C. 185. It should be noted that any statute which deregulates pipelines must also revise this section of the Mineral Leasing Act. All pipelines receiving a permit crossing federal lands must be operated as common carriers. 30 U.S.C. 185 r (1). The pipeline must transport all oil without discrimination without regard to whether it was produced on federal land. 30 U.S.C. 185 r (2)(A). All oil owned by the government or owned by any lessee of government land has the right to have their oil carried at reasonable rates and without discrimination. 30 U.S.C. 185 r (4). A substantial number of pipelines hold permits to cross federal lands. See, Hearings before the Subcomm. on Public Lands of the House Comm. on Interior and Insular Affairs, 93rd Cong., 1st Sess., Oil and Natural Gas Pipeline Rights-of-Way, 112-114 (1973).

149. Supra note 143.

150. In other industries access to rights-of-way is a particular problem. For example, coal slurry pipelines have not been built because of the lack of either state or federal eminent domain authority. Without such authority, railroads have been able to stop or greatly delay the entry of coal slurry pipelines. Federal eminent domain legislation has been thwarted thus far in the Congress.

151. Coburn II-19-23.

152. See Coburn 58, 64-65.

153. Wolbert, supra note 90, at 229 et seq.

154. W. Baumol, Contestable Markets: An Uprising in the Theory of Industry Structure, 72 American Econ. Rev. 1 (1982); E. Bailey, Contestability and the Design of Regulatory and Antitrust Policy, 71 American Econ. Rev. 178 (1981).

155. Baumol indicates that a perfectly contestable market is a benchmark for desirable industrial organization. The characteristics of a perfectly contestable market are: (1) entry is absolutely free and exit is absolutely costless; (2) it never offers more than a normal rate of profit--its economic profits must be zero or negative; (3) there is an absence of any sort of inefficiency in production in industry equilibrium; and (4) in long-run equilibrium no product can be sold at a price that is less than its marginal cost. W. Baumol, Contestable Markets: An Uprising in the Theory of Industry Structure, 72 American Econ. Rev. 1-5 (1982).

156. Id. at 3-4.

157. Id. at 4.

158. E. Bailey, Contestability and the Design of Regulatory and Antitrust Policy, 71 American Econ. Rev. 178 (1981). Bailey, citing the work of Demsetz, indicates that "it is sunk costs and not economies of scale which constitute the barrier to entry that confers monopoly power. It is primarily the risk involved in expending large sums of money in order to acquire sunk-cost facilities that deters new entry when an otherwise profitable entry opportunity arises. Potential competition becomes an ever more effective force as the extent of large irretrievable entry costs declines." Id. at 178-179.

159. Id. at 179.

160. Supra note 100.

161. 49 U.S.C. 2 and 49 U.S.C. 41, 43 (the latter are known as the Elkins Act).

162. There is another question that has been discussed extensively in the literature on oil pipelines and that is, does the dividend confer a cost advantage to the owner-shipper that can be used in an anticompetitive manner? This issue stems from the situation that owner-shippers receiving a dividend are shipping at cost, while nonowner-shippers are shipping at something above cost. Many have argued that this situation is inherently unfair (see Senate Pipeline Report 85-86) while others have indicated that the owner-shipper is merely receiving its normal return on investment for the risk it took for building the pipeline in the first place. More fundamentally, however, the question is whether the dividend includes something more than a normal return on investment and whether this extra return can be used in a competitively advantageous manner. While no one has been able to prove whether the dividend has been used in an anticompetitive manner

in upstream markets, DOE has shown conclusively that it has not been used in gasoline marketing, at least during the last decade. In a study released in January 1981, DOE concludes that profits from upstream segments have not been used to subsidize gasoline marketing during the 1970s. Delaney, Fenili, and Field, The State of Competition in Gasoline Marketing, 1981. Given the highly competitive nature of gasoline marketing, it is very unlikely that in deregulated environment, that any returns above a normal return on investment to pipeline shipper-owners that also market gasoline will be used in downstream marketing in an anticompetitive manner.

163. The cases are cited and discussed in Senate Pipeline Report 119-122.

164. Id. at 122-123.

165. An example may help to illustrate this concept.

	Pipeline A	Pipeline B
Equity	$1,000,000	$ 100,000
Debt	--	900,000
Total Valuation	1,000,000	1,000,000
Interest @ 10%	-0-	90,000
Dividend Return to Equity (7% of total valuation)	70,000	70,000
Total Allowed Return to Capital	70,000	160,000

Pipeline A, 100 percent equity financed, receives a total return to capital of $70,000. Pipeline B, which has only 10 percent equity, receives the same dollar return to equity of $70,000, but, it also receives $90,000 in interest recovery through its rates, for a total dollar return to capital of $160,000. Thus, the higher the percentage of debt, the higher dollar return to capital and, in turn, the higher total percentage return to capital. D. Mead, Exxon Paper on TAPS Deregulation, 2-3 (October 27, 1981), memorandum to Robert Means, Director, Office of Regulatory Analysis, FERC, attached to letter from Means to Frank L. Heard, Jr., General Counsel, Exxon Pipeline Company, October 27, 1981.

166. U.S. v. The Atlantic Refining Company, et al., Civil Action No. 14060 (D.D.C. November 16, 1981), Motion of The United States To Vacate The Final Judgment And For Other Relief.

167. U.S. v. The Atlantic Refining Company, et al., Statement of Points And Authorities In Support Of Motion Of The United States Of America To Vacate The Final Judgment And For Other Relief, 12.

168. 49 U.S.C. 3(1), 13(4).

169. 49 U.S.C. 2, 3(1). See, Potomac Elec. Power Co. v. Penn Central, 356 I.C.C. 815, 827 (1977); Lynchburg Traffic Bureau v. U.S, 225 F. Supp. 874 (W.D.Va. 1963), aff'd 377 U.S. 270 (1964).

170. Minnelusa Oil Corp. v. Continental Pipe Line Co., 258 I.C.C. 41 (1944); Pipeline Rates on Propane from Southwest to Midwest, 318 I.C.C. 615 (Div. 2 1962).

171. Ownership shares are distributed among the eight in the following manner: Sohio 33.24%, Arco 20.96%, Exxon 19.93%, BP 16.15%, Mobil 4.98%, Phillips 1.63%, Union 1.63%, and Amerada Hess 1.46%. BP owns a controlling interest in Sohio; therefore, their ownership shares should be combined to present a truer picture of control.

172. United States Geological Survey, Circular 860, Estimates of Undiscovered Recoverable Conventional Resources of Oil and Gas in the U.S., (1982).

173. In an analysis by Exxon, it is stated that every $1.00 reduction in TAPS' tariffs bestows a 25-cent benefit on Alaska, 13 cents coming from the TAPS owners and 12 cents indirectly through the federal income tax. Exxon, Deregulation of TAPS, 5 (September 16, 1981).

Senator STEVENS. Thank you very much. Mr. Baxter.

Mr. BAXTER. Thank you, Senator Stevens. The Department of Justice and the administration approached the question of deregulation of oil pipelines with a very strong orientation toward reliance on competitive markets in the very large preponderance of circumstances where it will yield effective competition and prices that correspond at least roughly with the cost of yielding the service.

We approach S. 1626 in that orientation, and while we do not support the bill in its detail, we agree completely with its underlying premise that society should rely, wherever possible, on market performance.

However, we think that the circumstances can be devised that result in the complete deregulation of an overwhelming majority of the pipeline mileage in the lower 48. And the problem, as we see it, is one of designing a procedure that would bring about that result. The heart of the problem is to identify that relatively limited number of instances in which a pipeline does have significant market power.

Our general concept along the lines that Mr. Coburn has suggested would be deregulation of the entire industry at a point in time; a continuing obligation to keep records which would make possible the reimposition of regulation effectively and at low cost; a simple, quick procedure whereby shippers could share the existence of critical facts which strongly indicate the presence of market power, which would then cast upon the pipeline the burden of showing that notwithstanding that that preliminary test had been satisfied, it did not, in fact, have market power.

We think that through a combination of such steps, we could move quite quickly from the present circumstances of pervasive regulation over a very large number of instances unjustifiably in the great preponderance of those instances, to a situation where most of the industry was deregulated and nevertheless, regulation was preserved in that limited number of cases where it was warranted.

I would be happy to talk more about the nature of those tests. We still are working at them. We do not have a fully fleshed-out program, but I will not go into greater detail at this particular time. In my written statement which I have submitted, somewhat greater detail is provided.

I would make only one other point in my summary of my statement. The bill contemplates the continuation of public utility-like provisions such as requirements of equal access, the requirement of posting of tariffs and prohibitions against the departure from tariffs, prohibition against discrimination even after the disappearance of rate regulation.

We strongly oppose the continuation of those common carrier type arrangements where regulation itself is removed. Devices of that sort are backup measures to effective tariff price regulation. They often make sense as backup measures, but if price regulation is removed on the ground that competition is adequate to take care of the job, then it is a serious mistake to keep provisions of this kind in force. In a situation of rivalry provisions of that kind can and often do—and in this industry—are likely to serve as devices

which facilitate collusion among the rivals. And rather than improve economic performance, are very, very likely to worsen it.

So that if there is sufficient competition to remove price regulation, then there is also sufficient competition to remove these collateral measures. And in our view, to keep them around would be a very, very serious mistake, far more likely to impair competitive performance than to improve it.

I will desist, Mr. Chairman, at that point, but would be happy to elaborate or answer any questions that the committee may have.

[The statement follows:]

STATEMENT OF WILLIAM F. BAXTER, ASSISTANT ATTORNEY GENERAL, ANTITRUST DIVISION

Mr. Chairman and members of the committee, I appreciate the opportunity to appear before the Committee on Commerce, Science and Transportation to present the views of the Department of Justice on deregulation of the oil pipeline industry. The Administration and this Department remain committed to the careful exploration of all possible opportunities to reduce and eliminate the burden of federal regulation on private enterprise. This is the basis of our approach to the oil pipeline industry, and of our views on S. 1626, a bill that would eliminate rate regulation for domestic interstate petroleum pipelines. While we do not support the bill in its details, we do agree completely with its underlying premise that our society should rely, wherever possible, on market forces, and that regulation should be resorted to only when clearly necessary. We believe that legislation, based on this premise, can be devised that would result in complete deregulation of an overwhelming majority of the oil pipeline mileage in the lower 48 states—a result that, we believe, is desirable. I will discuss the bill in the context of our position on deregulation of this industry.

We think that in this or any industry, complete deregulation is appropriate unless it clearly appears, first, that there is a serious defect in the ability of the competitive market to ensure efficient resource allocation, and, second, that the benefits of regulation exceed its costs. In the case of regulated pipelines, the first question reduces to the issue of whether significant monopoly power exists; with the exception of a few pipeline systems, we are convinced that most of the pipeline industry is competitive. Potential cost efficiencies and economies of scale might give a few pipelines market power in certain geographic markets. Other pipelines, however, and this applies to almost all, function competitively or so nearly competitively that continued regulation is not worth the costs it imposes. Therefore, there will be substantial benefits from deregulation, and this is the strongly preferred policy.

We must always bear in mind that regulatory costs are significant. The Department's experience before the FERC in such lengthy pipeline proceedings as the *TAPS* and *Williams Brothers Pipe Line* cases gives us first-hand knowledge of some of the regulatory costs borne by this industry. The costs, moreover, are exacerbated by the uncertainty resulting from the absence of reasonable and certain regulatory standards for the pipeline industry. The regulatory history has not been satisfactory. Regulation has been overly broad, and has been applied to pipelines where it is not justified at all.

The central question for any pipeline deregulation proposal, therefore, is how to achieve deregulation while distinguishing those few pipelines that exhibit significant market power and so should not be deregulated. One approach is case-by-case deregulation, wherein the FERC would be empowered to deregulate only those pipeline systems which could demonstrate that they operate in competitive markets. Under this approach, which we strongly oppose, deregulation would be slow, burdensome and certain, with a great danger that regulation would continue for a time, and to an extent beyond any legitimate need. Better alternatives are available. The Department of Justice and others in the Administration are in the process of examining various alternatives to deal with those few cases. We are collecting and analyzing available transportation data on shipments and prices to assess the substantiality of intra- and inter-modal competition faced by particular pipelines. The data generally suggest that continued regulation is no longer appropriate. This situation, in turn, indicates that the preferred policy alternative is general, complete deregulation, with very limited authority for continued or renewed regulation of a few pipeline systems if, but only if, the proponents of regulation establish a very solid basis for believing that continued regulation of a particular pipeline is called for because

it has significant market power. This approach preserves the virtue and benefits of immediate deregulation yet provides appropriate protection for shippers and consumers. This process would only apply to a few and limited cases and would take place quickly to reduce uncertainty in the industry.

While the precise features of our proposal are still being studied and considered by us and by others in the Administration, we are currently exploring the feasibility of a proposal with the following characteristics. It would provide for general and complete deregulation of oil pipelines on a date certain following enactment of the legislation. In an interim period between enactment and actual deregulation, shipper or other interested parties would have an opportunity to establish certain basic facts pointing to a high probability that a particular pipeline system has significant market power—i.e., the ability to raise its charges for a significant period of time substantially above those that would earn a competitive rate of return. In the few instances where the proponent of regulation is able to satisfy this stringent test, a fuller regulatory proceeding would take place to consider all relevant market facts to determine if significant market power exists.[1] Of course, if no one comes forward during the interim period or if the case for continued regulation has not been made, the pipeline would be deregulated on the date specified in the legislation. We are also exploring the use of other, concurrent paths to deregulation for particular pipelines in cases where, due to their small size or lack of economic significance, one can confidently conclude that the benefits of regulation will be outweighed by its costs, even without a detailed study of the degree of market competition.

The workability of the basic procedure, or course, depends on the test the shipper would have to satisfy. Any such threshold or first-stage test must be a strict one, i.e., it must very strongly predict that the capability of raising and maintaining prices above competitive levels exists. The test would also have to be objective, precise, and verifiable by information reasonably available to the shipper or other proponent of continued regulation. We anticipate that the application of this first-stage test would result in deregulation in the great majority of markets without the need for extensive evidentiary hearings. Simply put, there will likely be only a handful of situations where pipelines will be subject to a second stage test. But in the few cases where it is met, the regulatory body would then be free to consider all relevant evidence adduced by both shippers and the carrier as to the substantiality of competition. Such evidence would deal with all forms of actual and potential competition, intermodal and intramodal, along both the market corridor and at the endpoints of the pipeline market. We believe that such a procedure would, with reasonable efficiency and certainty, result in continued pipeline regulation in only those few cases in which it is genuinely needed.

I should also point out that while deregulating rates, S. 1626 would leave intact a plethora of other Interstate Commerce Act provisions applicable to rate discrimination, published tariffs, access regulation, and the like. Proponents of this approach argue that these provisions should be retained to ensure that competition is not impaired. However, a pipeline that has an economic motivation for engaging in access discrimination may also find it profitable to charge high rates that serve the same purpose of effectively restricting access to the pipeline. But that unregulated rate whose reasonableness may not by law be examined cannot be the basis of a shipper's denial of access claim, even though it may be abundantly clear that the unregulated rate alone is the basis for nonshipment. Put another way, if access regulation is necessary, so is rate regulation; if pipelines are so competitive that rate regulation is superfluous, then so is access regulation.

In fact, if the predicate of deregulation is the existence of vigorous competition among pipelines or among transport modes, certain types of accesss regulation, such as the requirement of published tariffs from which no deviation is permitted, could be highly anticompetitive, and may even facilitate collusion among competitors. For these reasons, I am very troubled by the notion being advanced that these regulatory provisions, if allowed to continue, alone will remove any residual competitive problems posed by rate deregulation. To the contrary, they may be ineffective in markets where significant market power exists, and may lead to anticompetitive situations in competitive markets.

For example, the posting of tariffs with advance notice of changes and the prohibition on negotiated discounts from tariffs imposed by common carrier regulation would significantly increase the ability of otherwise competing pipelines to price col-

[1] The data can be developed most efficiently by the pipelines themselves, so that there is every incentive to conduct deregulation proceedings in an expeditious fashion, and there is every reason to believe that all data favorable to the proponents of FERC action will be adduced.

lusively, while at the same time destroying the incentives traditionally associated with price rivalry among competitors. Additionally, the limitations on long-term contracts, while necessary to make common carrier regulation work, deprive shippers of an important ability to bargain, if not for prices, then at least for flexible, accommodating terms and conditions. Interestingly, the available economic data from the period when oil pipelines were common carriers, but before the imposition of any rate of return guidelines, suggest that oil pipelines were able to earn very high profits when common carrier regulation was imposed without rates regulation.

I should also point out that deregulation could, in some circumstances, raise questions under the Sherman and Clayton Acts about the structure of certain oil pipelines, many of which are overlapping joint ventures. The present Interstate Commerce Act scheme of rate and access regulation creates no special Sherman or Clayton Act immunity for oil pipelines. However, the existence of effective regulation is a significant factor in evaluating oil pipeline ownership structure under the antitrust laws. Conversely, the structure of pipeline ownership in any particular market may be a relevant or controlling factor in a deregulation proceeding. To address these concerns in the relatively small number of cases to which they might apply, the Department believes that any deregulation proposal should include an appropriate antitrust savings clause. Specifically, this clause should allow challenges to deregulated joint ventures under the antitrust laws where the joint venture may create, allow or continue the exercise of market power. The issue of appropriate remedies should also be addressed. In some cases, deregulation that appears doubtful may be acceptable if joint venture ownership of the line is eliminated, or if there is a requirement, among others, that ownership in the joint venture be open to all potential shippers.

In summary, Mr. Chairman, we believe that our proposed deregulation process would result in nearly complete deregulation in an orderly, carefully scrutinized manner with appropriate safeguards. Regulation is simply no longer necessary, except for those very few pipelines possessing significant market power.

I thank the Committee for this opportunity to present our view on this complex and challenging topic, and I would be happy to respond to any questions that you or any member may have.

Senator STEVENS. Well, gentlemen, as I understand it, you are in support of the concept of deregulation but you find the approach of S. 1626 in some manner not adequate to meet the administration's position. Could you be more particular as to how you would suggest changing S. 1626?

Mr. BAXTER. Well, I am not prepared to propose changes to the wording of S. 1626; rather, we are proposing a procedure that is designed to move the industry from its present regulated status to a nonregulated status as quickly as possible and at the lowest possible cost by means of creating some procedures that would enable us to identify quickly and at low cost the rather small number of instances where regulation would still be important.

S. 1626 does not adopt that general approach, and that is the general approach that we think is the desirable one.

Senator STEVENS. Can we then expect an alternative to S. 1626 to be submitted by the administration?

Mr. BAXTER. Yes, sir.

Senator STEVENS. Could you give us an indication of when we might expect that?

Mr. BAXTER. I am confident that we will not have completed the work we have in mind and view as prerequisite during the present Congress. I would think that we would be able to have such a measure ready for the Congress consideration very early in the next Congress; I would think sometime in the spring.

Senator STEVENS. What about this triggering device that you mentioned to bring about reregulation? There is a form of regulation that regulates our life. Do you contemplate a regulation of the type that exists now, or a limited form of regulation being trig-

gered by particular circumstances? Can you give us any indication at all of where you are going? Or is that going to be based upon the capacity of the particular pipelines or the impact on the market? Or, what is the guideline that you are looking to?

Mr. BAXTER. Well, the guideline would really be a question of whether competition is effective. If competition is not effective in a particular market, then the reregulation of which I speak would come into play in general, and certainly in the case of a line like TAPS which exhibits very significant market power at its northern end.

I would suppose that what has classically been referred to as individual cost of service type utility rate regulation would be the appropriate mechanism. In other markets where there are several participants, that is not anywhere near so unambiguously clear, and one can imagine other approaches that one could take.

One might decide to apply individual costs of service type regulation to the largest or perhaps to the largest two pipelines feeding an area, and rely on the downward price pressure that results from that approach to keep everyone else in line with the consequence that the other participants could be deregulated under those circumstances, even if there were very high levels of concentration.

There would be situations where one could know, on the basis of several easily observed characteristics of pipelines, that they simply did not warrant the very high cost of cranking up the regulatory machinery, and the costs of regulation itself are, indeed, very high.

I would suppose, for example, that if one knew of any given pipeline that the line was not over 6 inches in diameter at its point of maximum size, that it could not possibly represent the kind of significant economic force unchecked by competition that would warrant a regulatory approach. And we think there are other quick and simple tests that would enable us to identify the relatively few numbers of situations where the cost of regulation might sensibly be incurred, and to limit regulation to those situations.

Senator STEVENS. Well, in other circumstances I might be able to agree, but when you have the problems of access and also the problems of interlocking ownerships in the oil industry that we all know exist, I do not know how we can have deregulation unless we have some form of knowledge of the tariff circumstances and some way to guarantee access. Are you indicating that the administration is prepared to abandon the concept of common carrier principles as applied to these pipelines?

Mr. BAXTER. As applied to the great majority of them, yes.

Senator STEVENS. Do you have any questions, Senator Cannon?

Senator CANNON. Well, I was very happy to see you state in your prepared text here that there are substantial benefits from deregulation. That is certainly the preferred policy.

Now, it is my understanding that TAPS is excluded from this bill. Isn't that correct?

Senator STEVENS. That is correct. There is an amendment to put it in. But it is excluded from the bill as introduced. It is primarily a lower 48 bill.

Senator CANNON. Because I think there you get into a concentration of power there where you can have no effective competition insofar as TAPS is concerned.

But according to your statement, as I understand it, Mr. Baxter, and also, Mr. Coburn, you feel that there is competition in most of the markets, most of the pipeline markets, that would, in effect, regulate the prices, would keep the prices in proper balance. Is that correct?

Mr. BAXTER. That it would, indeed, not only keep the prices in proper bounds, but where competition itself would guarantee that there is access to the product. Just as we do not worry about access to drug stores, there is no real problem about access to transportation services of petroleum products in the great majority of markets.

And these public utility type restrictions such as access requirements, the requirement that everyone publish a tariff and charge no prices other than those that are listed in the tariff, which effectively precludes the use of long-term contracts as well, will, in the absence of price regulation, almost invariably make a market perform significantly worse rather than better.

Senator CANNON. And if there were an attempt to limit access, you people could proceed on the antitrust basis, couldn't you, without any problem?

Mr. BAXTER. Yes, indeed, we could. Indeed, in any legislation that is passed we think there should be an antitrust savings clause for precisely the reason that Senator Stevens indicated.

There are many, many pipelines that are jointly operated, and that doesn't cause particular problems in a regulated environment. And often, it would not cause particular problems in an unregulated environment, either. But we think that it is one of the factors that should be taken into account and that we would want an opportunity to look at those joint ownership situations afresh in an unregulated environment and see if there were any that were troublesome.

Mr. COBURN. I might add, Senator Cannon, that I agree substantially with Mr. Baxter; that is, essentially price regulation and access regulation are the two sides of the same coin. And if you do away with one, there is really no reason why you need the other. Price can be used as a denial of access just as easily as an outright denial of access can be used to limit entry into a pipeline, and if a pipeline is competitive, if there are other ways of getting product moved through other forms of transportation, then there is no reason to have one type of residual regulation after you remove price regulation.

So we feel just as strongly that if you remove price regulation, you ought to remove the whole panoply of regulation as well.

Senator CANNON. Thank you. Thank you, Mr. Chairman.

Senator STEVENS. Thank you very much. When we return we will turn to the testimony of Mr. Means, Director of the Office of Regulatory Analysis of FERC. We will stand in recess. We have got to go vote.

[Recess.]

Senator STEVENS. The committee will come to order.

Mr. Robert Means of FERC is our next witness.

STATEMENT OF ROBERT C. MEANS, DIRECTOR, OFFICE OF REGULATORY ANALYSIS, FEDERAL ENERGY REGULATORY COMMISSION, ACCOMPANIED BY ED MALET, OFFICE OF GENERAL COUNSEL

Mr. MEANS. Good morning. I am very pleased to have the opportunity to testify before the committee. Chairman Butler had a Commission meeting this morning, and therefore I am testifying. I am Robert Means, Director of the Office of Regulatory Analysis. With me this morning is Ed Malet of the Office of General Counsel.

I have submitted the written testimony which represents the views of Chairman Butler and represents my views and the views of my office. It does not necessarily represent the views of the other commissioners of the Federal Energy Regulatory Commission.

With your permission, I will just briefly comment on the testimony.

Senator STEVENS. Please do so.

Mr. MEANS. Like the administration witnesses, we strongly support a move toward deregulation, for two reasons. First, much of the regulation is burdensome for both the Commission and for the parties subject to it and does not bring any commensurate gain to the public. How costly it would be, I think no one knows, because the Interstate Commerce Commission never fully addressed the problems that would be involved in a full regulation of the oil pipelines.

The second concern is with offering adequate incentives for new oil pipelines to develop new areas of oil resources. We, therefore, support a move toward deregulation. The technical drafting problems involved in this have been difficult. The present bill, S. 1626, is a substantial improvement over earlier bills and for that reason, I think, highlights more clearly the policy issues that are involved.

At this point we do not fully support S. 1626, in two respects. On one side, we are concerned that it may not go far enough toward deregulation. We are concerned with the largely unpredictable results of eliminating regulation of overall rate level while retaining regulation of rate design, prohibitions against discrimination, as well as common-carrier status and the public filing of tariffs.

And we are also then concerned that deregulation, if extended to all oil pipelines, would not in all cases serve the public interest, because of the monopoly power that does appear to be possessed by a limited number of pipelines, certainly TAPS and also perhaps some in the lower 48 States.

The latter concern leads to the kind of proposal that was discussed by Mr. Coburn and Professor Baxter, some attempt to distinguish between those cases in which regulation is needed and those cases in which it is not. The Federal Energy Regulatory Commission is cooperating with the Department of Energy and the Department of Justice in trying to formulate a workable standard.

The problem that is posed by that approach is one of devising a standard that can be quickly applied so as not to create an extended period of uncertainty concerning which pipelines are and which pipelines are not to be subject to regulation.

That concludes my comments on the testimony, Mr. Chairman. And I would be happy to respond to questions or to elaborate on the testimony.

Senator STEVENS. Are there studies underway now as far as the impact of regulation on the oil pipelines? Are you conducting studies?

Mr. MEANS. I want to be sure that I understand your question, Mr. Chairman. There are studies under way to try to determine which pipelines would be found to have monopoly power under some workable standard and which would not. I am not aware of any empirical studies that are underway that would, for example, address the question whether current regulation discourages pipeline investment.

Senator STEVENS. What is the timeframe of the studies that are underway dealing with monopoly power?

Mr. MEANS. They are what were described by Professor Baxter as being the first step moving toward the administration bill. They are underway. The Federal Energy Regulatory Commission is not directly in charge of administering them. They would be done substantially before the bill itself would be ready.

Senator STEVENS. You and Professor Baxter mentioned long-term contracts. Is there a conclusion now that long-term contracts in the oil pipeline area would be a protection against monopoly power?

Mr. MEANS. Yes. They would provide a substantial measure of protection against monopoly power in the case of at least the crude oil pipelines, analogous to the protection that natural gas producers now receive from long-term contracts with natural gas pipelines.

Senator STEVENS. Is there any inclination on the part of FERC or the administration, to your knowledge, to be willing to go part way toward deregulation by exempting long-term contracts?

Mr. MEANS. I cannot speak for the administration on this. I know that it is one of the alternatives that has been discussed. I cannot speak to its status within the administration's thinking.

Senator STEVENS. We were told by Professor Baxter we might as well not expect a bill up here this year representing the administration's point of view. Have you been part of any discussions that would indicate any area of this controversy that the settlement of which by legislation would be acceptable to the administration this year?

Mr. MEANS. It seems to me that there are two areas for potential legislation. One concerns deregulating at least part of the industry.

The second concerns the way in which the part that is still subject to regulation would be regulated, whether it would be some modification of the current regime provided under the Interstate Commerce Act. I am not aware of even any serious analytical thinking directed toward the latter. I think the responsibility for that, in large part, rests upon the Federal Energy Regulatory Commission because it is difficult to address that until we get our decision in the *Williams* case.

Senator STEVENS. I understand that a decision regarding the first areas that could be deregulated, has been delayed because of indecision as to the type of reregulation that would be involved in the event that the deregulated pipeline should come back under regula-

tion because of an allegation of monopoly power, or the problem as to what to do with the balance of the pipelines that are not deregulated.

And I am really concerned that we do not have a position in the administration on the first part. Why can we not get a decision on the portion of the industry that the administration believes should now be deregulated? Is there not general agreement on that in terms of the size and condition and capacity of the pipelines involved?

Mr. MEANS. I, of course, cannot speak for the administration. I can give you my best understanding of the nature of the problem. There is, I think, substantial agreement on defining many pipelines, possibly a majority of the pipelines, that could safely be deregulated. The problem arises when one attempts to push out beyond that core of perhaps pipelines of 6 inches and less, ones which clearly face competition.

In order to make the deregulation substantially more comprehensive, I believe, and I believe those involved in the administration believe, that it would be possible to deregulate more pipelines than the ones that we can immediately identify. But the analytical difficulties get greater as one pushes out further, as one tries to do a more complete job of freeing those pipelines that do not need to be regulated. So the answer is, yes, there is a consensus, but the consensus does not go as far as I think the administration and also Chairman Butler and I hope it will be possible for the legislation to go.

Senator STEVENS. Well, thank you very much. I failed to say that your statement, and the statements of the others, will be printed in the record, and so I appreciate your courtesy in summarizing your statement. Thank you very much, Mr. Means.

[The statement follows:]

STATEMENT OF ROBERT C. MEANS, DIRECTOR, OFFICE OF REGULATORY ANALYSIS, FEDERAL ENERGY REGULATORY COMMISSION

Mr. Chairman and members of the subcommittee, thank you for inviting me to testify today. At the outset I would like to commend the Subcommittee, and Senator Nickles in particular, for going forward with these hearings. They represent an important initiative in the continuing effort to eliminate unneeded and burdensome economic regulation. It is thus an honor to be afforded the opportunity to address today issues relevant to the proposal to deregulate the oil pipeline industry.

The policy questions discussed in my testimony [1] may also be relevant to the *Williams* and *TAPS* oil pipeline cases that are now before the Commission. I must emphasize two points, however. First, in those cases the FERC is called on to apply a particular statute, not to make an unfettered policy choice. The second point is that in those cases we must decide on the factual record properly developed in them. My testimony here therefore should not be understood to reflect a commitment to a particular outcome in the *Williams* and *TAPS* cases. In view of the evident relationship between those cases and the subject of this hearing, however, my testimony will not deal with particular pipelines. One practical effect of this limitation is that my testimony will be limited to oil pipelines in the lower 48 states.

I would like to begin by setting out the principal regulatory concerns that have shaped the policy debate over oil pipelines. As I will discuss later, I believe that these concerns have been overstated in significant respects and also that they overlook major arguments for deregulation. It is, however, difficult to understand either

[1] It also needs to be made clear that this testimony is mine and does not necesarily reflect the views of either the Commission or any of my colleagues individually.

the policy debate or the existing regulatory structure without some understanding of the opposing view which might be called "the case for regulation."

The basic concerns appear to be three. The first and most straightforward is that, in the absence of regulation, pipelines would set unreasonably high rates. In its traditional form this was a concern with monopoly profits, and the Interstate Commerce Act's response also was traditional: it made it unlawful for oil pipelines to charge "unreasonable" prices.[2] In 1980 the windfall profit tax added a new dimension to this concern, since it may create an incentive for vertically integrated pipelines to set high rates in order to transfer profits from their producing affiliates to the pipeline, thus avoiding the tax.[3] Although the tax may have created an additional motive to set higher rates, however, it did not increase pipelines' ability to do so. That ability still depends on the existence of monopoly power.

The second concern is that pipelines would discriminate between shippers. Both the issues and the statutory provisions relevant to this concern are complex. Part of the complexity derives from the fact that most oil pipelines are vertically integrated, that is, they are subsidiaries of oil companies that also are shippers on the pipeline. Vertical integration may create additional incentives for discrimination. An independent oil pipeline might seek to discriminate in order to increase its profits by charging a higher rate to less price responsive shippers and a lower rate to more price responsive ones. A vertically integrated pipeline might discriminate for this reason, but it might also do so in order to improve the competitive position of its corporate affiliates in upstream and downstream markets.

Vertical integration may also affect the form of the discrimination. Discrimination consists most obviously of non-cost-justified differences in price or service, or indeed in a refusal to serve certain shippers at all. Discrimination of this kind is expressly dealt with by a number of provisions of the Interstate Commerce Act and other legislation. These provisions are described in an appendix to this testimony. Here I will just briefly sketch their coverage. Basically, the provisions do three things. They guarantee access to a pipeline's services by imposing a common carrier obligation. They make the terms of service publicly available by requiring that services be offered only under the terms of a publicly filed tariff and by forbidding rebates. And they prohibit both discriminatory pricing in general and also certain specific forms of price discrimination.

If a pipeline is vertically integrated, however, even, uniform high rates arguably can be discriminatory if they are excessively high, since for independent shippers they constitute a real cost while for affiliates they merely transfer economic rents from one corporate affiliate to another. This kind of reasoning does not appear to have been used in applying the Interstate Commerce Act's prohibitions against discriminatory pricing, but it did form the basis for the 1941 antitrust decree under the antirebate provisions of the Elkins Act. In obtaining that decree the Antitrust Division of the Department of Justice argued that dividends paid to an affiliated shipper constituted rebates and therefore violated the Elkins Act.[4] Recently the Division has modified this position to argue that revenues lawfully collected under the Interstate Commerce Act may be paid as dividends to owner-shippers.[5] Under this latter statement of the theory, for vertically integrated oil pipelines the problem of rebates and perhaps the problem of discrimination in general are not clearly distinct from the problem of excessively high rates.

The problem of discrimination and excessively high rates are also related in another way. Both assume the existence of monopoly power. A pipeline with no such power would have little ability to charge different rates to different shippers. Moreover, to the extent that it did so, little real harm would result, since shippers could turn to competing pipelines or other transportation modes.

The third concern is with what might be called the undersizing problem.[6] Briefly stated, the argument is as follows. If an oil pipeline has monopoly power, it can to some degree control the volume of crude oil or refined products flowing out of the upstream markets or into the downstream markets that it serves. Regulation presumably prevents the pipeline from exploiting this power directly by setting higher

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[2] 49 U.S.C. § 1(5) (1976) (repealed except for its application to oil pipelines and removed from the United States Code, Revised Interstate Commerce Act, Pub. L. No. 95-473, § 4(c), 92 Stat. 1470 (1978). See 49 U.S.C. § 1(5) and chapter 101 note (Supp. III 1979)).

[3] 26 U.S.C. §§ 4986-4998 (Supp. IV 1980).

[4] *United States* v. *Atlantic Refining Co.*, Civil Action No. 14060 (D.D.C.: 1941).

[5] Statement of Points and Authorities in Support of Motion of United States of America to Vacate the Final Judgment and for Other Relief at 6, *United States* v. *Atlantic Refining Co.*, Civil Action No. 14060 (D.D.C. 1981).

[6] Flexner, Oil Pipelines: The Case for Divestiture, in "Oil Pipelines and Public Policy: Analysis of Proposals for Industry Reform and Reorganization" (E. Mitchell ed. 1979).

rates, but if the pipeline is vertically integrated it may be able to exploit the power indirectly by restricting the flow in order to raise prices in its affiliates' markets. The pipeline's common carrier obligation prevents it from restricting the flow simply by denying access to its services. In theory, however, the company can restrict the flow by building a smaller pipeline than would be economically justified by the potential traffic.

There is considerable doubt that the undersizing problem has anything more than a theoretical existence. The problem does not in any event appear to be relevant to the present hearings. If the problem exists, it might violate general antitrust laws, but it appears not to violate any existing provision of the Interstate Commerce Act or related legislation, nor would it do so under S. 1626.

Let me summarize at this point. There appear to be two regulatory concerns that are relevant to this hearing. One is that, absent regulation, oil pipelines will charge prices that are excessively high; the other is that, again absent regulation, they will discriminate between shippers in price or service. These concerns are interrelated. Both depend on the existence of monopoly power. And for vertically integrated companies, the problems themselves are not wholly distinct, since uniform but high rates may be held to violate one or more of the statutory provisions intended to deal with discrimination.

This analysis suggests that S. 1626 raises two general kinds of issues. First, would the repeal of the Interstate Commerce Act's prohibition against unreasonable rates lead to excessively high rates for oil pipeline transportation? Second, is the repeal of that prohibition consistent with the retention of the anti-discrimination provisions of the Interstate Commerce Act and related legislation?

On the first issue, the critical question concerns monopoly power. Or, to state it more precisely, the question is, do oil pipelines possess sufficient market power to justify the retention of federal price controls? I believe that in general they do not. Oil pipelines, like natural gas pipelines, are characterized by economies of scale. Costs per barrel fall as the size of a pipeline increases, so that generally it is cheaper to carry a given volume of oil between two points through a single large pipeline rather than through two or more smaller ones.[7] However, for several reasons these economies of scale do not in general result in effective monopoly power. First, as a result of market growth, the first pipeline built along a route may prove to be too small, so that one or more additional pipelines are required. As a result, a number of routes are served today by two or more competing pipelines.[8]

Second, the market power of existing pipelines is also limited by the potential competition of pipelines that might be built if rates are sufficiently high. The Interstate Commerce Act establishes no legal barrier to the entry of new oil pipelines; no certificate of public convenience and necessity is required in order to build and operate an oil pipeline. The only question that must be asked by a company considering building a new pipeline is, will it pay? And the higher the rate charged by existing pipelines, the greater the likelihood that this question will be answered in the affirmative. Such potential competition probably is particularly effective where the existing pipeline is an independent one, since the pipeline company then knows that its shippers could build their own pipeline if it sets rates that are too high.

A third important limit on market power is imposed by pipelines serving other routes. The essence of competition is that buyers and sellers have a number of different opportunities available to them. In the case of oil pipelines this can occur even if no route is served by more than a single pipeline. If a producing area is served by a number of pipelines, it generally is unimportant to producers that the pipelines serve different downstream markets and therefore take different routes. Similarly, if a number of pipelines terminate in a single consuming area, they are in competition with each other even though they may originate in different places.

Finally, oil pipelines face intermodal competition. Tankers and barges can compete with pipelines over some long routes, and trucks can compete over short ones. The costs of the other modes will seldom precisely match those of pipelines, but in many cases their actual or potential competition constitutes an effective limit on the oil pipelines' market power.

No one seriously contends that the oil pipeline industry is an example of perfect competition in the textbook sense. Probably most oil pipelines do possess some market power. However, market power in varying degrees characterizes virtually all sectors of the U.S. economy. The question is, does the market power possessed by oil pipelines constitute a sufficient danger to justify the retention of federal price

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[7] E. Mitchell, "A Study of Oil Pipeline Competition" at 6 (1982).

[8] L. Coburn, "United States Petroleum Pipelines: An Empirical Analysis of Pipeline Sizing," Appendix II (1980); E. Mitchell, "A Study of Oil Pipeline Competition" (1982).

controls? In answering that question, it is very important to be realistic about the regulatory alternative. Price regulation is neither infallible nor cheap. An administrative agency is unlikely to succeed in setting the price that would result from perfect competition; limited resources, imperfect analysis, and conflicting goals make rate regulation a very blunt instrument. Regulation therefore is likely to improve on the performance of an unregulated market only if monopoly or other market imperfections are very substantial. It seems to me to be at least doubtful that the market power possessed by oil pipelines in most markets rises to that level.

Moreover, price regulation itself carries direct and indirect costs. It is impossible at this time to estimate the cost of an effective regulation of all oil pipelines. However, this direct regulatory cost alone may well be comparable to the efficiency gained from effective price regulation,[9] and to this direct cost must be added industry's compliance costs and the distortions in investment and operations that are an inevitable by-product of imperfect price regulation. Simply stated, for the nation as a whole, it is far less than obvious that the present system of oil pipeline regulation is a good bargain.

A much harder question is whether regulation limited to a relatively few pipelines would be justified on grounds of efficiency or fairness. There do appear to be some markets where pipelines may have significant monopoly power. This has been referred to by some as the "pockets of monopoly power" problem. These markets appear to be of two general kinds. One consists of small isolated producing areas, which are likely to be served by only a single pipeline and may be distant from any competing pipeline. The potential market power of pipelines in such areas is increased by the fact that oil producers, in contrast to natural gas producers, do not enter into long-term contracts with pipelines. Thus, in the oil industry, producers do not contractually fix their economic relationship with pipelines at the time when their bargaining position is strongest, when the reserves are still in the ground and the field is still undeveloped. If oil pipelines were now deregulated, independent producers in fully-developed fields would generally stand in a poor bargaining position in negotiating a transportation contract.

Two points should be made to put the producers' problem in perspective, however. The first is that it is the producers' problem: pipeline rates for carrying crude oil from isolated producing fields to refineries are likely to have no measurable impact on the price paid by consumers; they will instead affect the price received by producers. The second point is that the producers themselves do not appear to be concerned about this problem. Producers may be more concerned with the creation of adequate incentives to build new pipelines than with potential price increases that are likely to amount to only a few cents per barrel in most cases.

The second kind of market where little competition may exist consists of inland cities that are served by only a single pipeline. Even for these cities, the potential competition of new pipelines places some limit on the existing pipeline's market power. However, for such cities deregulation might lead to substantially higher oil transportation costs, which probably would in turn be passed on to consumers.

To deal with the problem of inland cities and perhaps also with that of isolated producing areas, Congressional consideration might be given to creating a limited price regulation applicable only where significant market power exists. If this approach is taken, I believe that the presumption should be against regulation; that is, pipelines should be free of regulation unless market power were shown to exist. It also should be made clear that the market power and potential for abuse should be substantial: rate regulation should not be imposed merely because a market does not conform to the ideal of perfect competition.

The second general issue by S. 1626 concerns the retention of the anti-discrimination provisions of the Interstate Commerce Act and related legislation. The Committee may, as I have suggested, wish to consider creating some sort of regulatory mechanism for dealing with cases where monopoly power does in fact exist. However, the retention of only the current antidiscrimination provisions [10] for this purpose may create significant problems. The anti-discrimination provisions would of course prevent a pipeline from charging different rates for the same service or from setting rate differentials that were not reasonably cost justified. These provisions would, however, provide little protection where the pipeline that possessed monopoly power was not affiliated with its shippers, since they would not protect the shippers on such a pipeline from rates that were uniformly high.

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[9] T. Morlan, D. Skelly, and A. Reznek, "Price Elasticities of Demand for Motor Gasoline and Other Petroleum Products" (1981).

[10] See Appendix.

Perhaps the more serious problem potentially created by retention of these provisions, however, is that they could provide the means for a general reimposition of price controls on the vertically integrated firms that constitute the larger part of the industry. Under the Antitrust Division's current interpretation of the Elkins Act,[11] that Act's antirebate provision makes it illegal for vertically integrated pipelines to pay dividends in excess of a "reasonable" return.[12] At present that return can be based on the FERC's general regulation of pipeline rates, but if pipelines were freed from general rate regulation, payment of dividends to affiliated shippers could make them vulnerable to treble damage actions under the Elkins Act. Moreover, a logical extension of the Antitrust Division's argument would imply that the Interstate Commerce Act's own prohibitions against discriminatory rates could be converted into a prohibition against uniform but high rates in the case of these vertically integrated oil pipelines.

It is difficult to assess the seriousness of this problem. It depends not only on the interpretation of the provisions concerned but also on the likelihood that the provisions will be used in this way by the Antitrust Division, by the FERC, or by private parties. What can be said at this point is that these provisions constitute an unpredictable danger that regulation through regular administrative process will simply be converted into regulation through litigation. To avoid this danger the committee may wish to consider clarifying the meaning of the provisions in question, so that they are not violated by uniform high prices or by dividends paid to corporate affiliates. To the extent that high prices and excessive dividends are viewed as a serious problem, it appears that it would be preferable to deal with the problem directly through continued price regulation in a few markets rather than indirectly through prohibition against discriminatory prices and rebates.

APPENDIX

STATUTORY DISCRIMINATION PROVISIONS APPLICABLE TO OIL PIPELINES

A. Common carrier obligations

Section 1(4) of the Interstate Commerce Act[1] obligates every common carrier, upon reasonable request, to furnish transportation. Common carriers are also required to establish through routes with other carriers and to establish just and reasonable rates. Oil pipelines are common carriers by virtue of § 1(3)(a) of the Interstate Commerce Act.

B. Tariff and rebate restrictions

A common carrier is required by § 6(1) of the Interstate Commerce Act to file tariff schedules showing all transportation rates and charges. Filed tariffs may not be changed without 30 days' notice to the Commission, § 6(3). Carriers are prohibited from transporting unless the rates and charges for such transport are on file nor may a carrier charge compensation which differs from the filed tariff, § 6(7).

Section 10 of the Interstate Commerce Act contains complementary criminal penalties for false billing or classification by a common carrier; for shippers who obtain lower rates through false billing, classification, or claims; and for inducing unjust discrimination. (This latter provision also subjects the person and common carrier involved to civil liability.) In addition, § 15(15) requires the filed tariffs to show the allowances made by a carrier for any related service to the carrier by a shipper.

The Interstate Commerce Act also contains two distinct rebate prohibitions. Section 2 of the 1887 Act, declares unlawful any special rate, rebate, drawback, or device through which a common carrier is compensated by a person to a greater or lesser extent than the carrier is compensated by another similarly situated person.

The Elkins Act[2] amended the Interstate Commerce Act in 1903, strengthening both the filed tariff and rebate provisions. It established criminal penalties (1) for the willful failure to file, publish, or observe tariffs, and (2) for the knowing offer, grant or gift, or solicitation, acceptance, or receipt of any rebate, concession, or dis-

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[11] 49 U.S.C. §§ 41–43 (1976) (repealed except for its application to oil pipelines and removed from the United States Code, Revised Interstate Commerce Act, Pub. L. No. 95–473, § 4(c), 92 Stat. 1470 (1978). See 49 U.S.C. § 1(5) and chapter 101 note (Supp. III 1979)).

[12] Statement of Points and Authorities in Support of Motion of United States of America to Vacate the Final Judgment and for Other Relief at 6, *United States* v. *Atlantic Refining Co.*, Civil Action No. 14060 (D.D.C. 1981).

[1] 49 U.S.C. § 1(4)(1976) (repealed except for its application to oil pipelines and removed from the United States Code, Revised Interstate Commerce Act, Pub. L. No. 95–473, § 4(c), 92 Stat. 1470 (1978). See 49 U.S.C. § 1(5) and chapter 101 note (Supp. III 1979)).

[2] 32 Stat. 847 (1903), as amended, 34 Stat. 587 (1906), 49 U.S.C. §§ 41–43 (1976).

crimination by which property was transported for less than the filed rate, § 41(1). The Elkins Act also imposed fines treble the amount of the rebate, on those guilty of receiving rebates from a carrier, § 41(3).[3]

C. Price discrimination

There are four statutory provisions applicable to oil pipelines which prohibit price discrimination. Section 2 of the Interstate Commece Act declares rebates to be unjust discrimination. Section 3 makes it unlawful for a common carrier to give any undue preference or advantage or to subject any person or place to any undue or unreasonable prejudice or disadvantage. Interestingly, the prohibitions of § 3 do not apply to discrimination, prejudice, or disadvantage to the traffic of any other carrier. Section 4 prohibits a common carrier from charging greater compensation for short hauls over the same line and in the same direction as long hauls.[4]

The final price discrimination provision is § 2 of the Clayton Act, known as the Robinson-Patman Act,[5] under which it is unlawful to discriminate in price between different purchasers of commodities of like grade and quality where such discrimination may be substantially to lessen competition or tend to create a monopoly, unless the price differentials make allowance for differences in the cost of manufacture, sale or delivery.[6]

Senator STEVENS. The next witness is Teo Spengler, representing the office of the Governor of Alaska.

STATEMENT OF TEO SPENGLER, DEPUTY DIRECTOR OF STATE/FEDERAL RELATIONS, OFFICE OF THE GOVERNOR, STATE OF ALASKA, ACCOMPANIED BY ROBERT LOEFFLER, COUNSEL

Ms. SPENGLER. Good morning, Senator, Mr. Chairman, and members of the committee. I very much appreciate this opportunity to summarize the views of the State of Alaska on the question of oil pipeline regulation, an issue in which the State has a direct and vital interest. I am Teo Spengler, the deputy director of State/Federal relations in the Alaska Governor's office. Joining me today is Robert Loeffler, one of our Washington, D.C., counsels.

My comments today will deal only with regulation of the trans-Alaska pipeline system and its feeder lines. Alaska takes no position on the question of pipeline deregulation in the lower 49 States, but believes that whatever Congress may conclude about the desirability of continuing or discontinuing oil pipeline rate regulation as a general matter, such regulation should without question be continued for TAPS.

The State believes that TAPS is and will remain a natural monopoly, insulated from actual or potential competition. There is no network of competing pipelines or alternative modes of transportation to which deregulation advocates can point as forces tending to keep rates down. Nor is there any existing or potential competition from alternative modes of transporting North Slope oil to U.S. markets.

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[3] In the motion of the Justice Department to vacate the 1941 consent decree limiting the oil pipelines' return on equity, a central issue is the circumstances under which a dividend by an affiliated company constitutes a rebate. Statement of Points and Authorities in Support of Motion of United States of America to vacate the Final Judgment and for Other Relief at 6, *United States* v. *Atlantic Refining Co.*, Civil Action No. 14060 (D.D.C. 1981).

[4] Section 13(4) of the Interstate Commerce Act prohibits state regulations from discriminating against interstate or foreign commerce, and § 26(c) contains a similar provision for state taxes.

[5] Robinson-Patman Act, 15 U.S.C. §§ 13–136, 21a (1976).

[6] The statutory antitrust immunity of oil pipelines is limited to rate agreements between carriers which have been approved by the Commission. 49 U.S.C. § 5b (1976). The authority to enforce the Robinson-Patman Act as it applies to oil pipelines resides in DOE. 42 U.S.C. § 7155 (Supp. II 1978).

During the period between discovery of oil on the North Slope and the commitment to build TAPS, a number of other proposals were considered for the transport of North Slope oil. These included a possible trans-Canada pipeline route, icebreaking tankers, trucks, and railroads. All were rejected because none was as economical or generally as feasible as TAPS.

Nor do the owners of TAPS compete among themselves. North Slope production currently is matched to the capacity of the pipeline and is expected to continue to do so for many years. While production in the original field of Alaska's North Slope may begin to decline late in this decade, crude oil from other fields will be flowing into the pipeline. Oil from the Kuparak Field, for example, began to flow late in 1981. As long as the pipeline is operating at capacity, there is simply no incentive for any TAPS owner to cut its price or otherwise to compete, since it could not thereby increase its sales. A price cut would mean merely less revenue for the price cutter.

Even if production were to fall below the pipeline's capacity at some point in the future, it is less likely that price competition would ensue than that the pipeline owners would reduce capacity by decommissioning one or more pump stations, much as they increased capacity in the past by adding pump stations.

The industry-sponsored Barber report on TAPS discusses whether or not TAPS should be regulated and whether it is a monopoly. It argues that continued regulation is unnecessary to keep TAPS rates reasonable.

The State believes the Barber report is deeply flawed. First, the report cites the fact that the published tariffs of the TAPS owners differ as evidence of competitive forces. However, some owners have acknowledged, and as to others it has been shown in the TAPS litigation, that TAPS tariffs have always been set at the maximum allowed by a 40-year-old consent decree that restricts oil pipeline dividends and thus effectively limits rates.

TAPS rates vary only because the owners have differing capital structures and, therefore, differing limits under the consent decree. Moreover, as a consequence of cross-tendering much of the oil that moves through the pipeline does so at the composite rate—now about $5.85 a barrel.

Second, the Barber report cites potential competition from surface tankers and other as yet unbuilt pipelines as a constraint on TAPS rates. As I have already indicated, however, this is simply unrealistic.

Third, the Barber report dwells at length on the competitive nature of the market for Alaskan oil on the west and gulf coasts of the United States but does not discuss why that fact has any bearing on the TAPS rates.

As the report acknowledges, the market price of Alaskan oil is set by competitive forces at the oil's ultimate destination. Changes in TAPS rates do not, therefore, affect the market price. They affect only the wellhead price of the oil at Prudhoe Bay, which is determined by subtracting shipping costs, including TAPS tariffs, from the market price.

The centerpiece of the Barber report is the argument that in order to spur exploration and development of North Slope reserves

so that enough crude is produced to fill the pipeline, the TAPS owners are interested in encouraging a reasonably high wellhead price and that that interest restrains TAPS tariffs.

Because the report completely ignores the fact that TAPS owners are also oil producers, however, its conclusion that the relationship between wellhead price and North Slope development restrains TAPS is simply wrong. To a producer who is also a pipeline owner, revenues from production and shipment are simply two parts in a single stream of income. All things being equal, an integrated company is thus largely indifferent between a dollar of wellhead revenue and a dollar of shipping revenue.

But all things are not equal. For one thing, TAPS faces no competition in the shipment of North Slope oil. There is considerable competition for the right to explore and develop North Slope reserves, which manifests itself in bidding for oil leases on State, Federal, and Alaska native lands. The lower the wellhead price, the lower the bids to an integrated company.

Therefore, the correct strategy is obvious: Maximize the profit, maximize the TAPS tariff, and so minimize the wellhead price. The total stream of revenues will be the same to the integrated company. But if the wellhead price is kept low, there will be lower taxes, less competition, and lower bids for leases, and thus higher net revenues in both the short run and the long run.

We must assume that rates would remain, if otherwise unconstrained, more or less at monopoly levels. This, of course, operates to the detriment of nonowner shippers. It also injures the State of Alaska by decreasing the wellhead price on which the State's royalty and tax revenues depend.

But that is not all. Excessive tax rates also decrease the income of the United States by reducing revenues from lease sales on the North Slope and Federal corporate income tax receipts. Under present law, a reduction of $1 on a TAPS tariff would increase Federal tax revenues by between 10 and 15 cents, over $60 million per year at present production levels. In addition, Federal royalties would be directly affected when Beaufort goes online in the early 1990's.

But the issue is not solely the health of the State and Federal treasuries. Of greater importance is the sensitivity of North Slope production and development to changes in the wellhead price, as evidenced by the recent cutback in development of the Kuparak Field because of reductions in projected oil prices. There are many potential oil-producing areas on the North Slope, and the development of each of them depends upon an adequate wellhead price. As the Department of Justice has recognized in the *TAPS* case, if TAPS rates exceed reasonable levels so that the wellhead price of North Slope crude oil is artificially deflated, incentives for exploration and production of new Alaskan crude oil will be reduced accordingly.

Mr. Chairman, to Alaska the rationale of rate regulation applies directly to TAPS, and the arguments advanced for deregulating other pipelines are inapplicable to this admitted monopoly.

This concludes my prepared remarks. Mr. Loeffler and I would be happy to respond to any questions.

Senator STEVENS. Thank you. Some of my colleagues make the point that this dispute over TAPS is just a dispute between our State and the owners and it should not involve the Federal Government, and therefore we should be subject to the same general law that applies to all the United States. What is the State's answer to that?

Ms. SPENGLER. Although, in fact, the State is a party to the TAPS tariff litigation with the oil companies, this is an issue that affects not just the oil companies and the State. The Federal Government has revenues at stake, between 10 and 15 cents of each dollar that the TAPS tariff is reduced goes directly to the Federal Government in corporate income tax revenues.

Besides that, I think that there is a vital national interest in encouraging exploration and development on the North Slope. And that is something that this administration has been interested in.

Senator STEVENS. How much money is escrowed already in that litigation?

Mr. LOEFFLER. Excuse me. I am a little short of voice today. But by the end of the year it will be in the vicinity of $2 billion.

Senator STEVENS. Any indication at all when we can expect action by FERC on the issue, short of a settlement between the parties?

Mr. LOEFFLER. We hope that we will get a decision on phase I of the case in the next 6 months or so. But this past summer we moved for expedited consideration, and FERC turned us down. And they said when they get done with Williams, they will send a companion order down in TAPS. It is the only formal indication we have.

Senator STEVENS. Then there is every expectation, even after the final decision by FERC, there would be continuing litigation, is there not, unless there is a settlement between the parties?

Mr. LOEFFLER. That is right. In fact, what we are expecting is a decision only in phase I of the case. And it is very likely that there could be a remand, another trial. It could go up to the Commission again, and then you go to court. And you could be looking at 5 to 10 years of continued litigation.

Senator STEVENS. Thank you very much. I appreciate your testimony and your appearance here today. And we will obviously be concerned with the issue for some time.

[The statement follows:]

STATEMENT OF TEO SPENGLER, DEPUTY DIRECTOR, STATE/FEDERAL RELATIONS, OFFICE OF THE GOVERNOR, STATE OF ALASKA

Mr. Chairman and members of the subcommittee, I very much appreciate this opportunity to outline for you the views of the State of Alaska on the question of oil pipeline regulation, an issue in which the State has a direct and vital interest. I am Teo Spengler, the Deputy Director of State/Federal Relations in the Alaska Governor's office. Joining me today is Robert Loeffler, a partner in the Washington office of the law firm of Morrison & Foerster, who has represented the State on numerous matters, including the Alaska Gas Pipeline and aspects of the TAPS litigation.

My comments today will deal only with regulation of the Trans-Alaska Pipeline System—TAPS, as it is known—and its feeder lines. Alaska takes no position on the question of pipeline deregulation in the Lower 48 states, but believes that whatever Congress may conclude about the desirability of continuing or discontinuing oil pipeline rate regulation as a general matter, such regulation should without question be contined for TAPS. The State takes this position because TAPS is, and will

remain, a natural monopoly. In the absence of regulation its tariffs will remain unreasonably high, thereby depriving Alaska and the United States not only of hundreds of millions of dollars each year but also of potentially hundreds of millions of barrels of oil.

Alaska's interest in TAPS rates is direct and vital. Alaska, with the United States, shares a crucial interest in encouraging development of the promising oil and gas potential in and near Alaska's North Slope. High TAPS transportation charges undermine the incentive for such development. Alaska, as the lessor of the Prudhoe Bay field, receives a royalty of one-eighth of the production, which, at its election, it may take in-kind. In recent years, Alaska has so elected and has sold its royalty oil to in-State and out-of-State buyers who must use the TAPS line to ship the oil to market. The price Alaska receives for the oil is the market price less transportation charges. High charges for transportation through TAPS thus reduce the wellhead price and lower Alaska's royalties. Alaska also levies severance taxes at the wellhead, and low wellhead prices reduce severance tax revenues. All in all, every dollar reduction in wellhead value means approximately 25 cents less revenue from royalties and serverance taxes to Alaska. For reasons explained later in my testimony, each dollar reduction in wellhead value also decreases federal revenues by between 10 and 15 cents.

Why should Congress single out TAPS? To begin with, TAPS and its feeder lines comprise the single largest oil pipeline system in the country. In fact, TAPS represents approximately half of the total U.S. investment in oil pipelines—more than 9 billion dollars—and earns approximately half of the revenues of all major U.S. oil pipelines. Moreover, it is the only means of transporting oil from Alaska's North Slope to U.S. markets. It is not merely another pipeline, and Congress can and should take specific account of TAPS' unique status as it considers pipeline regulatory policy.

In addition, TAPS has a combination of special characteristics that would make deregulation of its ratesetting processes very bad public policy. The historical bases for regulation of oil pipeline rates have direct applicability to TAPS, and the arguments advanced for deregulating pipelines in the Lower 48 states are inapplicable to it. You do not have to take the word of the State of Alaska on this point. The Departments of Justice and Energy, the Federal Energy Regulatory Commission (FERC), and the Office of Management and Budget all agree that TAPS should remain regulated even if pipelines in the lower 48 states are not.

Rate regulation was imposed on oil pipelines in 1906 because of a perception that those pipelines had substantial monopoly power which could be—and had been—used to achieve anticompetitive and other undesirable economic ends. Most directly, such monopoly power was seen as permitting pipeline owners to raise tariffs above competitive levels. Many current advocates of deregulation believe that oil pipelines no longer posses such monopoly power as a general matter, and that workable competition among pipelines or with competing modes of transportation may operate to keep pipeline rates at or near competitive levels in the absence of regulation. Without getting into the debate over whether this is true as a general matter, I want to emphasize that it is clearly not true as far as TAPS is concerned.

TAPS is a natural monopoly, insulated from actual or potential competition. There is no network of competing pipelines or alternative modes of transportation to which deregulation advocates can point as forces tending to keep rates down. TAPS is the only pipeline between Prudhow Bay and Alaska's southern coast, and will doubtless remain so. It cost $9 billion to construct in the mid-1970's, and, given the physical, financial, legal, and economic difficulties involved, it is clear that no competing pipeline will be built. If the need for additional capacity ever arose, it would be far cheaper to expand TAPS than to duplicate it.

The Administrative Law Judge in the *TAPS* rate case now pending before the Federal Energy Regulatory Commission determined, after hearings that fill 25,000 pages of transcript and generated 900 exhibits, that the possibility that another pipeline could be built to compete with TAPS is "remote." There is, Judge Kane found, "no substantial risk today of that possibility."[1] The difficulties being experienced with financing the proposed Alaska Natural Gas Pipeline System merely reinforce that conclusion.

Nor is there any existing or potential competition from alternative modes of transporting North Slope oil to U.S. markets. As Judge Kane's opinion in Phase I of the *TAPS* case pointed out, during the period between the discovery of oil on the North Slope and the commitment to build TAPS, a number of other proposals were

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[1] Initial Decision Phase I Issues at 84, Trans-Alaska Pipeline System, Docket No. OR78-1 (F.E.R.C. Feb. 1, 1980) ("Initial Decision").

considered for the transport of North Slope oil. These included a possible Trans-Canada pipeline route, ice-breaking tankers, trucks, and railroads. All were "promptly rejected" because none was "as economical or generally as feasible" as TAPS.[2] Recent confirmation of the infeasibility of nonpipeline competition with TAPS may be found in the case of the Coast Guard Icebreaker Polar Sea: two winters ago it become ice-bound in the vicinity of Kotzebue, off Alaska's Northwestern coast, and could not be extricated until the Spring.

Thus, TAPS as a whole faces neither existing nor potential competition. In the words of Judge Kane, TAPS "enjoys a de facto if not a de jure monopoly position which, for economic feasibility reasons, it is practically certain to retain."[3] No one seriously contests this. Indeed, the Department of Energy reached the same conclusion in its May 1982 report on "Petroleum Pipeline Deregulation: A Competititive Analysis."

Nor do the owners of TAPS compete among themselves. North Slope production currently is matched to the capacity of the pipeline, and is expected to continue to do so for many years. While production in the original, Sadlerochit field of Alaska's North Slope may begin to decline late in this decade, crude oil from other fields will be flowing into the pipeline—oil from the Kuparak field, for example, began to flow late in 1981. One U.S. Geological Survey Report states that there is a 95 percent chance that an additional 7 billion barrels of oil will be discovered on or near the North Slope; if so, all of it will be shipped through TAPS.

As long as the pipeline is operating at capacity, there is simply no incentive for any TAPS owner to cut its price or otherwise to compete, since it could not thereby increase its sales. A price cut would merely mean less revenue for the price-cutter. Even if production were to fall below the pipeline's capacity at some point in the future, it is less likely that price competition would ensue than that the pipeline owners would reduce capacity by decommissioning one or more pump stations, much as they have increased capacity in the past by adding pump stations. The Department of Justice, in briefs filed in the *TAPS* case, has concurred in Alaska's position that the structure of TAP's ownership and various other factors make meaningful competition unlikely, even were production to fall below the pipeline's capacity. But the point is academic. The fact is that the pipeline will be operating at capacity well into the foreseeable future, so that at least for a considerable period of time there will be no competition at all among TAPS owners.

The industry-sponsored Mitchell Report does not address TAPS, and the TAPS owners therefore commissioned Richard J. Barber Associates, Inc. to prepare a separate report on "The Transportation of Alaskan North Slope Oil By Pipeline." The Barber Report, which was released last May, argues that continued regulation is unnecessary to keep TAPS rates reasonable because of existing competition among the owners of TAPS, potential competition from other means of transporting North Slope oil to market, and the alleged long-term interest of the owners in reasonable rates as a means of encouraging the development of North Slope reserves and thus keeping TAPS full. The State believes that the Barber Report is deeply flawed and wholly unpersuasive.

First, the Report cites the fact that the published tariffs of the TAPS owners differ as evidence of competitive forces. But some owners have acknowledged, and as to others it has been shown in the *TAPS* litigation, that TAPS tariffs have always been set at the maximum allowed by a 40-year-old consent decree that restricts oil pipeline dividends and thus effectively limits rates. TAPS rates vary only because the owners have differing debt/equity structures and therefore different limits under the consent decree. They would be still higher if the decree were not in place.[4] Moreover, as a consequence of cross-tendering much of the oil that moves through the pipeline does so at the composite rate—now about $5.85 per barrel.

In short, there is no price competition within TAPS. If there were, all of the TAPS owners would have reacted when Exxon, reduced its rates from $6.30 per barrel to $5.30 per barrel last December to meet the requirements of the consent decree. For six months, however, none of them did anything, and their respective shares of TAPS-transported oil did not change. In July British Petroleum reduced its rates, but did not claim that competitive forces played a role in its decision.

Second, the Barber Report cites potential competition from surface tankers and other, as yet unbuilt, pipelines as a constraint on TAPS rates. As I have already

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[2] Id.

[3] Id.

[4] Last fall the Department of Justice moved to vacate the decree, but a ruling on the motion has been postponed while the Department and the oil pipeline companies attempt to negotiate their differences.

indicated, however, this is simply unrealistic. We would have thought that the conclusions of Judge Kane and the Department of Energy, the difficulties facing the Alaska Natural Gas Transportation System, and the fate of the icebreaker Polar Sea would lay to rest all speculation about alternatives to TAPS, including a stream of tankers moving in the Beaufort and Chukchi Seas.

Third, the Barber Report dwells at length upon the competitive nature of the market for Alaskan Oil on the West and Gulf Coasts of the United States, but does not discuss why that fact has any bearing on TAPS rates. As the Report acknowledges, the market price of Alaskan oil is set by competitive forces at the oil's ultimate destination. Changes in TAPS rates do not, therefore, affect the market price; they affect only the wellhead price of the oil at Prudhoe Bay, which is determined by substracting shipping costs (including TAPS tariffs) from the market price. The market price of Alaska's oil would thus restrain TAPS tariffs only if the TAPS owners were interested in maintaining the wellhead price and were willing to reduce TAPS tariffs to achieve this when the market price declines.

The centerpiece of the Report is in fact the argument that in order to spur exploration and development of North Slope reserves so that enough crude oil is produced to fill the pipeline, the TAPS owners are interested in encouraging a reasonably high wellhead price, and that this interest restrains TAPS tariffs. The State is pleased at the TAPS owners' acknowledgment that the wellhead price of North Slope oil has an effect on exploration and development. Because the Barber Report completely ignores the fact that the TAPS owners are also oil producers, however, its conclusion that the relationship between wellhead prices and North Slope development restrains TAPS tariffs is simply wrong.

To a producer who is also a pipeline owner, revenues from production and shipment are simply two parts of a single stream of income from Alaskan oil. All things being equal, an integrated company is thus largely indifferent between a dollar of wellhead revenue and a dollar of shipping revenue. But all things are not equal. For one thing, as I will explain in a moment recent changes in the Internal Revenue Code have caused TAPS income to be taxed at lower rates than income from the sale of Sadlerochit oil. In addition, while TAPS faces no competition in the shipment of North Slope oil, there is considerable competition for the right to explore and develop North Slope reserves, which manifests itself in bidding for oil leases on State, Federal, and Alaska Native lands. The lower the projected wellhead price, the lower the bids. To an integrated company, therefore, the "correct" strategy is obvious—maximize the TAPS tariff and so minimize wellhead price. The total stream of revenues will be the same to the integrated company, whatever it does. But if the wellhead price is kept low there will be lower taxes, less competition and lower bids for leases, and thus higher net revenues in both the short run and long run.

In sum, neither alleged but unproven competition nor unsupported assertions about the long-term interests of the TAPS owners can be counted upon to keep the rates of an unregulated TAPS at reasonable levels. We must assume that rates would remain, if otherwise unconstrained, more or less at monopoly levels. This, of course, operates to the detriment of non-owner shippers. It also injures the State of Alaska by increasing the portion of the market price of crude oil attributable to transportation and decreasing the remaining portion—that is, the wellhead price—on which the State's royalty and tax revenues depend.

But that is not all. Excessive TAPS rates also decrease the income of the United States by reducing revenues from lease sales on the North Slope and federal corporate income tax receipts. The Tax Equity and Fiscal Responsibility Act of 1982, passed by Congress last month, eliminated the de facto windfall profits tax exemption previously enjoyed by companies shipping oil through TAPS. As a result, profits on the production and sale of Sadlerochit crude are taxed at a maximum rate of 70 percent, compared to a maximum rate of 46 percent on pipeline profits. Under the new law, a reduction of one dollar in the TAPS tariff would thus increase Federal tax revenues by between 10 and 15 cents—over $60 million per year at present production levels.

The issue is not solely the health of the state and federal treasuries. Of greater importance is the sensitivity of North Slope production and development to changes in wellhead price, as evidenced by the recent cutback in development of the Kuparuk Field because of reductions in projected oil prices. There are many potential oil producing areas on the North Slope, and development of each of them depends upon an adequate wellhead price. Higher tariffs, with corresponding lower wellhead prices, make production at marginal fields uneconomic. Unlike lower 48 fields, consumer prices do not have to be raised to make additional oil North Slope production economic—a reasonable TAPS tariff will do the job. But in the absence of competition, TAPS tariffs will not be reasonable unless regulation is continued.

It is also important to the interests of the United States that high TAPS rates significantly misallocate resources and limit competition in the production of crude oil. As the Department of Justice has recognized in the *TAPS* case, if TAPS rates exceed reasonable levels so that the wellhead price of North Slope crude oil is artificially deflated, incenties for exploration and production of new Alaskan crude oil will be reduced accordingly. Even if the monopoly profits reaped by the TAPS owners are viewed as available for exploration and production, those companies receive a significant competitive advantage over their rivals in the industry who do not own a piece of TAPS, and competition in exploration and production is restricted. Either way, an important part of our national energy policy is undermined to the detriment of the public interest.

It is occasionally argued that the time and resources consumed by the regulatory process outweigh any possible benefits. The process has certainly been lengthy and expensive in the *TAPS* rate case, but that is attributable in part to the fact that FERC is addressing issues that have never before been properly resolved. It can also be explained, I regret to say, by FERC's failure to resolve the *TAPS* and *Williams* cases in a timely manner. Briefing and argument in Phase I of the *TAPS* case were completed over two years ago, but no decision has yet emerged from FERC. In May, the State of Alaska and the Department of Justice asked FERC to decide the case expeditiously, but were turned down. In the *Williams* case, which has now been pending for over a decade, a Federal judge has ordered FERC to issue a decision on the merits by mid-October. FERC's appeal of that order is pending.

In any event, once the *TAPS* and *Williams* cases are finally resolved and a set of ratemaking principles is established, such proceedings will be much shorter and far less expensive. And we must put the costs of this litigation into perspective. The total expended by all parties on the *TAPS* litigation to date has not exceeded the dollars taken in by TAPS in ten days, and the costs imposed on non-owner shippers by the monopoly prices that would prevail in the absence of regulation dwarf the costs of the *TAPS* case.

Mr. Chairman, to Alaska the issue is straight-forward and uncomplicated. The rationale for rate regulation applies directly to TAPS, and the arguments advanced for deregulating other pipelines are inapplicable to this admitted monopoly. Deregulating TAPS would only result in monopoly profits for the pipeline owners while undermining the incentive for competitive development of the nation's most promising energy reserves. There is no reason to include TAPS and its feeder lines in oil pipeline deregulation legislation and every reason to exclude them.

That concludes my prepared remarks. Mr. Maynard, Mr. Loeffler and I would be happy to respond to any questions.

Senator STEVENS. Now we have a panel composed of Mr. Dean Taylor, president of the Association of Oil Pipelines; Ms. Linda Kamm, testifying on behalf of the Independent Refiners Association of America; and Mr. Jack Blum, testifying on behalf of the Independent Gasoline Marketers Council.

Good morning.

STATEMENTS OF DEAN TAYLOR, PRESIDENT, ASSOCIATION OF OIL PIPELINES, ACCOMPANIED BY EDWARD MITCHELL, PROFESSOR OF BUSINESS ECONOMICS, UNIVERSITY OF MICHIGAN; LINDA HELLER KAMM, INDEPENDENT REFINERS ASSOCIATION OF AMERICA; AND JACK BLUM, INDEPENDENT GASOLINE MARKETERS COUNCIL

Mr. TAYLOR. Good morning. My name is Dean B. Taylor. I am appearing today as chairman of the Association of Oil Pipelines, the AOPL, an unincorporated association of the 93 common carrier oil pipeline companies whose members transport over 95 percent of all crude oil and petroleum products that are moved by pipeline in interstate commerce. I am also president of the Phillips Pipeline Co. and Seaway Pipeline Co.

Also appearing here today are authors of two recent studies on competition in our industry: Prof. Edward J. Mitchell of the University of Michigan, who has completed a study for the OAPL on

pipelines in the lower 49 States; and Richard J. Barber, president of Richard J. Barber Associates, who has completed a study of the trans-Alaska pipeline system, TAPS, which was commissioned by the eight carriers owning undivided interests in TAPS.

The members of the association unanimously and enthusiastically support economic deregulation to eliminate the regulatory authorities to set levels of rates which oil pipelines may charge. This concept is embodied in S. 1626, with amendment 1239 introduced by Senator Nickles on December 11, 1981. The members unanimously adopted the resolution adopting their position supporting deregulation of each and every pipeline at the winter meeting of the OAPL.

Today we have an excellent oil pipeline network in place which was built and maintained by private capital and without Government subsidy. It has a long history and tradition of serving shippers' needs with virtual absence of complaints.

The emphasis in the future will be on the construction of new pipelines and in frontier areas. By "frontier areas," I am talking about the construction of offshore oil pipelines, oil pipelines in the Arctic, and construction of oil pipelines to transport oil obtained from shale deposits in our Western States.

There also may be a need for oil pipeline systems not yet conceived, even as an idea, as future supply and demand patterns shift in various geographic areas of the United States. Projects in the new geographical areas or involving the transportation of new sources of petroleum involve the development of expensive technology to construct such pipelines.

For example, the development of the technology alone to construct the trans-Alaska pipeline cost millions of dollars, even with the improved technology. When the pipeline was in the various stages of construction, problems that could not be foreseen arose, and the solution to those problems caused even more funds to be spent on this already expensive project.

If regulation of oil pipelines continues on the present course of squeezing down the rate of return that may be earned by oil pipelines, a prospective investor in the oil pipeline project is going to turn to alternate investment because of the low rate of return that can be expected from an investment in the oil pipeline project.

Squeeze-down regulation then becomes a deterrent to the construction of pipelines on what we are calling the "new frontiers." Competition among investment projects exist and is a very real factor. An offshore oil project must compete with projects not even related to the energy industry in order to attract capital dollars. How can a regulated industry with an unrealistic lid on the rate of return to the investor compete with an unregulated industry which can return a high percentage on every dollar invested?

Besides trying to attract institutional and public investors' dollars for pipeline construction, there is a general competition within the energy companies for pipeline construction versus other company projects which will return a greater return on investment.

Oil pipeline company management has to convince higher levels of management in the energy companies that capital dollars should be funneled into these offshore projects. Upper management, upper levels of management, also are most apt to choose funding a project

in an nonregulated industry where the rates of return may be higher.

Other factors concerning competition from other modes of transportation and economics are best addressed by Professor Mitchell, who has completed a study concerning competition in the pipeline industry.

I am speaking from a pipeline management point of view. It bears emphasizing that if another mode of transportation promises a higher rate of return to the investor, then such modes will in all probability be employed.

There have been some allegations made that major oil companies involved in pipeline projects have a tendency to increase rate bases for ratemaking purposes to scandalously high levels. This is not so. And on one of the largest construction projects to date, namely, the trans-Alaska pipeline, the rate base was high due to the geographical factors and the technology involved in dealing with such problems.

There has also been a lot of concern that in the absence of regulation that pipelines owned by major integrated oil companies will increase tariffs to the extent of forcing independent shippers to use other modes of more expensive transportation.

This is not the way the system based on competition such as the pipeline industry works. Tariffs can only be increased in line with competition, and there is competition in our industry. Any pipeline which significantly increases its tariffs runs the risk of losing volume to another pipeline company who delivers into the same area.

Some independent refiners have put forth the argument that it is extremely difficult to enter the pipeline industry. However, during the initial stages of construction on several joint venture pipelines, when independent refiners as well as others were offered the chance to invest in a project, thus becoming a shipper owner at whatever percentage ownership they desired to purchase, they declined. Why? Low rate of return.

Another argument is that deregulation will not keep prices down. One of the premises given is that the owner holds certain rights to move more volume on the pipelines. This is simply not true. Under the Interstate Commerce Act, pipelines are considered common carriers and, therefore, must accept all nominations of perils into the system. If the system becomes overloaded, pipeline company must use a fair and equitable proration policy to handle the volumes.

Those who are opposed to deregulation will cite examples of a vertically integrated company raising the tariff by a dollar a barrel, since it is the integrated company, the wellhead price of that company will be reduced. However, this is not the method used in establishing wellhead prices.

To my knowledge, there is only one pipeline system that determines the wellhead price by deducting transportation from the delivered market price. All other producers, including vertically integrated oil companies, establish price based upon competition. With or without regulation, rates are dependent upon market factors. Extreme rate increases will cause you to lose volume to a competi-

tor, resulting in a decrease in your return on a capital-intensive project.

We have laws today, aside from those that regulate pipelines, that will keep all integrated pipelines from agreeing to increase their rates to a prohibitive level thus shutting the small shipper out of the pipeline. Besides, there are several major pipeline companies that have no affiliation with a major integrated oil companies.

Several theories concerning deregulation have been proposed recently, such as total deregulation, deregulation on a pipeline-by-pipeline basis, and exclusion of certain lines from deregulation. Suffice it to say that the AOPL will be happy to comment on any of these new proposals once the details of such concepts have been reduced to some sort of a workable plan.

I would like to thank you for the opportunity to appear here today on behalf of an industry that is so vital to the Nation's economy and security. And I urge passage of S. 1626 and amendment 1239. Thank you very much.

[The statement follows:]

STATEMENT OF DEAN B. TAYLOR, CHAIRMAN, ASSOCIATION OF OIL PIPE LINES

Mr. Chairman and members of the committee, my name is Dean B. Taylor. I am appearing today as Chairman of the Association of Oil Pipe Lines (AOPL), an unincorporated association of ninety-three common carrier oil pipeline companies whose members transport over 95% of all crude oil and petroleum products which are moved by pipeline in interstate commerce. I also am President of Phillips Pipe Line Company and Seaway Pipe Line Company.

THE OIL PIPELINE INDUSTRY

The nation's oil pipeline system consists of approximately 227,000 miles of crude oil and product lines and represents an investment of over $19 billion. Under the Interstate Commerce Act entry into the oil pipeline business is unrestricted. No certificate of public convenience and necessity is required, unlike the case of natural gas pipeline companies. Also, unlike natural gas pipeline companies oil pipeline companies do not own the products they transport. Instead they act as common carriers, and title to the products they carry remains with the shippers. Both independent companies and companies affiliated with companies involved in other facets of the petroleum industry operate petroleum pipelines.

Also, appearing here today are the authors of two recent studies on competition in the oil pipeline industry, Professor Edward J. Mitchell of the University of Michigan, who has completed a study for the AOPL of oil pipelines in the lower forty-eight states, and Mr. Richard J. Barber, President of Richard J. Barber Associates, who has completed a study of the Trans Alaska Pipeline System (TAPS) which was commissioned by the eight carriers owning undivided interests in TAPS.

AOPL'S POSITION ON DEREGULATION

The members of AOPL unanimously and enthusiastically support "economic" deregulation to eliminate regulatory authority to set the level of rates which oil pipelines may charge. This concept is embodied in S. 1626 with Amendment 1239 introduced by Senator Nickles on December 11, 1981. The numbers unanimously adopted a resolution expressing their position supporting the economic deregulation of each and every pipeline at the 1981 winter meeting of AOPL.

NEW FRONTIERS AND THE FUTURE

We have today an excellent oil pipeline network in place, which has been built and maintained with private capital and without government subsidy. It has a long history and tradition of serving its shippers' needs with a virtual absence of complaints. If our nation is to realize the full benefit of its petroleum resources, this network will have to be maintained and expanded as new fields are discovered, oil fields are reworked, and market patterns shift. If rate level regulation makes addi-

tional oil pipeline investment unattractive, these new pipelines may not be built, or their construction delayed or performed in an uneconomical manner and the existing pipeline network will inevitably deteriorate, as has been the case in other industries which have found their returns inadequate to attract capital.

The emphasis in the future will be on the construction of new pipelines in frontier areas. By frontier areas I am talking about the construction of offshore oil pipelines; oil pipelines in the Arctic and construction of oil pipelines to transport oil obtained from shale deposits in the western states.

Yesterday an oil pipeline being built in Alaska was considered a new frontier. Tomorrow the new frontiers will in all probability be pipelines from offshore wells. The United States with an ocean on either side and of course the Gulf of Mexico has a vast geographic area yet to be tapped for the production of oil and gas. It is conceivable that in the future wells could be brought in all up and down either coastline. In order to get this production to shore or inland one of the cheapest and most efficient transportation modes would be an offshore pipeline system.

In the future new pipelines across our north and south borders might exist, bringing crude oil from Mexico and Canada into the United States. Further, in order to transport oil from our West Coast to the East Coast there may be a revival of plans for new pipelines running from the West to the East or the reversal of the flow of some pipelines already in place.

There may also be the need for pipeline systems not yet conceived even as an idea as future supply and demand patterns shift in various geographical areas of the United States.

Projects in new geographical areas or involving the transportation of new sources of petroleum involve the development of expensive technology to construct such pipelines. For example, the development of the technology to construct the Trans-Alaska pipeline cost millions of dollars. Even with the improved technology when the pipeline was in various stages of construction problems that could not have foreseen arose and the solution of those problems caused even more funds to be spent on this already expensive project. The total costs of new oil pipelines in now uncharted geographic areas may be astronomical.

Pipeline construction is capital expensive. Today to construct one mile of pipe in the lower 48 states which does not have unknown geographical factors it is not unusual to spend approximately $200,000.00 for a mile of pipe. Given the inflationary trend that we have been experiencing within a few years that same mile of pipeline would cost considerably more.

If regulation of oil pipelines continues on its present course, of squeezing down on the rate of return that may be earned by oil pipelines, a prospective investor in an oil pipeline project is going to turn to an alternate investment, because of low rates of return which can be expected from investment in oil pipeline projects.

Squeeze down regulation, then, becomes a deterrent to the construction of pipelines on what we are calling the "new frontiers".

Competition among investment projects exists and is a very real factor. An offshore pipeline project must compete with projects not even related to the energy industry in order to attract capital dollars. How can a regulated industry with an unrealistic lid on the rate of return to the investor compete with unregulated industries which can return a high percentage on every dollar invested? Besides trying to attract institutional and public investors' dollars for pipeline construction, there is internal competition within the energy companies for dollars for pipeline construction versus another company project which will return more on the company's investment. Oil pipeline company management must convince higher levels of management in the energy companies that capital dollars should be funneled into an offshore pipeline project or oil shale pipeline project rather than the company funneling its capital dollars into other projects where the rate of return is not regulated due to the price of the goods being manufactured being unregulated. Upper levels of management are most apt to choose funding of a project in a non-regulated industry.

Let's look at a hypothetical problem involving a frontier pipeline project. Several companies have struck oil off the coast of California. Each company needs to transport its production to shore. This can be done in two ways; each company can build its own separate pipeline, or one of the companies can build a large diameter common carrier pipeline to transport all of the volume coming from the new field. By constructing one large diameter pipeline one can take advantage of the economies of scale. And of course it would cost considerably less to build the one large diameter line than constructing several smaller diameter lines.

In the present uncertain regulatory climate, no one company is going to fund the construction of a large diameter line when the constructing company has reason to

anticipate that its rate of return on its investment due to regulation of tariffs will not warrant the expenditure for construction of such a pipeline. The result will be that if any lines are built it will be several small diameter lines constructed at prices substantially exceeding construction of the large diameter line. Someone along the distribution process is inevitably going to pay for the increased construction costs. Remove the regulation and companies will be competing to build or participate in the large diameter line to transport the volume out of the new field.

Other factors concerning competition from other modes of transportation and economics are best addressed by Professor Mitchell who has completed a study concerning competition in the pipeline industry. I am speaking from a pipeline management point of view. It does bear emphasizing that if another mode of transportation promises a higher rate of return to the investor then such modes will in all probability be employed. This is because the pipeline industry could not compete in obtaining construction funds even though after the pipeline was operable the transportation rate might be less than the other mode of transportation.

PROPOSED LEGISLATION

S. 1626 with the amendments to the Interstate Commerce Act will prevent this from happening. However, if S. 1626 is to accomplish its purpose it is essential that the amendments be included.

S. 1626, without the proposed amendments, amends only the Department of Energy Organization Act. While it addresses the authority of FERC, it does not address the obligations of the regulated carriers. To accomplish this, amendment of the Interstate Commerce Act is required. S. 1626, with the proposed amendments, not only amends the Department of Energy Organization Act, it also amends the Interstate Commerce Act to remove the regulatory authority of the FERC and the regulatory obligations of the regulated companies with respect to the level of rates in the highly competitive oil pipeline industry. It should be emphasized that this is all the Bill does. It does not, in any way, affect the obligations of oil pipeline companies respecting discriminatory practices. The FERC would retain authority to enforce those obligations.

EXCLUSION OF CERTAIN PIPELINES FROM DEREGULATION

There have been statements to the effect that rather than deregulation of all pipelines certain pipelines should not be deregulated for such variables as size, volume, revenues, or some other or combination of factors. The Association of Oil Pipe Lines believes that to separate out any particular pipeline is not in the best interest of the industry or the public. There are still frontier areas in the United States with respect to the production of petroleum and the means of getting that petroleum to market. Continued regulation of some pipelines will make investors think long and hard before investing in capital intensive pipeline projects for frontier areas where the rates of returns for such pipelines may not warrant the investors' risk due to regulation.

In the future there may be a need for more pipelines in the frontier areas of the Arctic, off-shore areas, oil shale deposits, and West to East pipelines. To single out any one pipeline for continued regulation will very possibly inhibit the construction of future pipelines that may also be subject to future regulation.

TOTAL DEREGULATION

In recent months it has been proposed that these common carrier obligations of oil pipelines also be removed and that total deregulation, not just economic deregulation, be enacted. We have been studying the concept, but it has not been possible to complete an analysis and develop an industry position because to date there has been no delineation of the details of total deregulation by the governmental bodies suggesting the concept. If such a concrete proposal concerning total deregulation is introduced the industry would be happy to comment on such a plan. At present about all the industry can say is that the concept of total deregulation is appealing, but would seem to raise a myriad of problems depending on the premises used to structure such a plan.

A few of the issues which cause concern are the effect such legislation would have on the industry's common carrier status, the possible effect on oil pipelines' powers of eminent domain, which are necessary to acquire right-of-way for new pipeline construction, and possible antitrust implications. If the Committee desires, we shall furnish our position for the record when it is formulated.

PIPELINE BY PIPELINE DEREGULATION

Another recent proposal is that legislation provide for deregulation on a pipeline by pipeline basis depending on an administrative determination whether or not the pipeline in question possesses excessive market power. Only the concept has been proposed; the test to determine whether such market power exists has not been specified nor what regulations would apply to the "re-regulated" pipelines. In the absence of a specific proposal, we have not been able to undertake an analysis; however, such a procedure appears to be unnecessary and is plagued with many problems. Recent studies show that the oil pipeline industry is competitive and that there is no need for pipeline by pipeline administrative determinations. Moreover, we have been subject to uncertainty for years awaiting administrative action regarding oil pipelines. These recent proposals seem to add more years of uncertainty. The experience at the ICC under the Staggers Rail Act confirms our fears in this regard. Thus, we may well be adverse to such an approach.

ANALYSIS OF PROPOSED LEGISLATION

A section by section analysis of S. 1626 with the printed amendments is included as Attachment B to my statement.

Thank you for this opportunity to appear before you on behalf of this industry which is so vital to the nation's economy and security. I, of course will also be glad to answer any questions you may have on my presentation.

ATTACHMENT A

The A.O.P.L. Executive Committee recommends to the membership that the Association actively support the Petroleum Pipeline Regulatory Reform Legislation (S-1626 and HR-4488) sponsored by Senator Nickles and Representative Synar with technical amendments required to essentially conform such legislation to the draft legislation approved by the A.O.P.L. Executive Committee on October 13, 1981, which includes amendments to the Interstate Commerce Act and does not exclude any common carrier petroleum pipelines.

ATTACHMENT B

ANALYSIS OF S. 1626

Section 2.—Section 2 is a declaration of legislative policy. It makes explicit congressional policy to foster competition in the oil pipeline industry, prevent discrimination, induce investment in oil pipelines and eliminate unnecessary regulation.

Section 3.—Section 3(a) repeals Section 306 of the Department of Energy Organization Act (DOE Act). Section 306 transferred to the Secretary of Energy (the Secretary) the functions set forth in the Interstate Commerce Act (ICA) and vested in the Interstate Commerce Commission (ICC) relating to transportation by oil by pipeline.

Section 3(b) repeals Section 402(b) of the DOE Act. Section 402(b) transferred to the Federal Energy Regulatory Commission (FERC) all functions and authority of the ICC relating to the regulation of rates for the transportation of oil by pipeline and the valuation of oil pipelines.

Section 3(c) amends Section 402 of the DOE Act by adding a new paragraph vesting in the FERC all functions which were transferred to the Secretary under Section 306 and to the FERC under Section 402(b).

Section 4.—Section 4 repeals the ICA to the extent that it vests authority to suspend, determine or prescribe rates for the transportation of oil by pipeline.

Section 5.—Section 5 is a section-by-section amendment of the ICA to accomplish the bill's purposes. In addition to the amendments discussed below provisions which refer only to railroads, such as references to "fares", have been deleted from the amended sections. Those provisions have already been repealed by Section 4 of the Revised Interstate Commerce Act, although the language of the ICA was not revised to reflect that appeal.

Section 1(4) of the ICA is amended to delete the requirement that oil pipeline rates and the divisions of joint rates must be just and reasonable. This is consistent with the intention to allow the level of such rates to be determined by market forces.

Section 1(5)(a), which requires that all charges by just and reasonable and that unjust and unreasonable charges are unlawful, is repealed.

Section 13(4) deals with the duty of the FERC where state regulations result in discrimination or impose an undue burden on interstate commerce. The statute is amended to eliminate the FERC's power to prescribe pipeline rates in place of those

set by a state. The FERC retains its authority to set such rates aside if it finds them to be discriminatory and to prescribe regulations and practices where the state-prescribed regulations result in discrimination.

Section 15(1) is amended to delete the power of the FERC to prescribe rates. If the FERC determines that a rate is discriminatory it may order the carrier to cease and desist from charging discriminatory rates. In that event it would be up to the carrier to adjust its rate structure to comply with the FERC's order. If the FERC finds that a regulation or practice is unjust it may prescribe a just regulation.

Section 15(3) is amended to delete the FERC's authority to establish joint rates. The FERC retains its authority to establish through routes.

Section 15(6) sets forth the FERC's authority to establish just divisions of joint rates. It is repealed.

Section 15(7) deals with hearings on newly-filed rates. It is amended to delete the FERC's authority to determine whether any new rate is just and reasonable and to eliminate the FERC's authority to suspend rates pending such determination. The FERC retains the authority to hold hearings to determine whether a rate is unjustly discriminatory and whether a regulation or practice is lawful. It may suspend the operation of a regulation or practice for a period of seven months, just as under the present statute.

49 U.S.C. § 65(a) is repealed, since it is simply a supplementary statute dealing with the matters which should be considered when prescribing just and reasonable rates.

Section 6.—This is a new section which preempts state regulation of interstate transportation of oil.

Section 7.—The Act shall take effect 60 days after the date of its enactment.

Senator STEVENS. Thank you, Mr. Mitchell. You are testifying along with Mr. Taylor, I believe. We are happy to have you, sir.

Mr. MITCHELL. Thank you, sir.

I am appearing here today on behalf of the Association of Oil Pipelines. My remarks are based primarily on research I conducted for AOPO on competition in the oil pipeline industry. My report, entitled "A Study of Oil Pipeline Competition," [1] has been submitted to the committee. So my comments at this time merely summarize what I conclude from that study.

Some of the evidence that I discovered that supports competitiveness of the oil pipeline industry are that pipelines typically face a number of rivals. In the largest metropolitan areas that I examined, those served by at least one product pipeline are served by an average of four to five local competing independent entities.

In addition, about 90 percent of the population of the largest cities have access to water transportation. The cost of moving oil by barge and tanker is about the same range as the cost of moving oil by pipeline. Thus, we find that within the United States 48 percent of all refined product and 41 percent of all crude oil were moved by water in 1979. This does not include the movement of foreign oil into the United States, which would be much larger than that.

Again, the barge and tanker industries are highly competitive and can be characterized as atomistic, and the ownership of the oil industries in those industries, in the barge and tanker industries, is quite small in the few cities, over half a million that are not served by water transport.

The average number of local competing entities, that is, pipelines and product pipelines and local refineries, is between five and six. Now, there are places where the number of rivals is less than average. I have investigated all of those cases where a single product

[1] The study is in the committee files.

pipeline serves a community of a half a million or greater. In most of these places, water transport of petroleum products represents a large fraction of local consumption, at least 30 to 40 percent, and typically much more than that.

In the other cases, there are either a large number of local refineries or a combination of actual or potential competition that suggests little or no potential for the exercise of monopoly power.

I have also looked at pipelines collecting crude oil in areas representing 98 percent of the lower 48 domestic production, and refinery centers representing 92 percent of lower 48 refinery capacity. Looking at either the average or the worst cases from a competitive point of view, I find again little or no potential for the exercise of monopoly power by oil pipelines.

In all, I looked at 182 markets and found that oil pipelines typically face substantial competition. The effects of this competition show up in the profit statistics. The delivered average rate of return on total capital for the industry is close to the average of all manufacturing industries, and further examination of the risk of the industry suggests that the oil pipeline industry is probably somewhat above average in risk, so the combination of average profits and above average risks are certainly consistent with the prevalence of competition.

Now, an argument can be raised as to whether the profitability of the industry is normal because the ICC or the FERC or the Elkins Act consent decree has held profits down. My analysis of the profit data shows no evidence that the ICC or the FERC has constrained industry profits, and that the consent decree may have significantly constrained profits in only a few cases. Thus, the profits and tariffs that we observe are due primarily to competitive conditions, not regulation.

The belief that pipeline rates should be regulated derive from the theory of natural monopoly, which states that unlimited economies of scale lead to a single firm dominating a market. While it is true that oil pipelines involve technical economies of scale with respect to pipe diameter, the various assumptions needed to get from that fact to monopoly are not valid in the case of oil pipelines.

Most markets are served by several oil pipelines, and if pipeline scale were a major determinant of competitive standing, then the larger pipeline should be more profitable than the smaller pipelines, and contrary to the presumption presented this morning by witnesses from the administration that we should perhaps deregulate small pipelines but not large pipelines, the profit data suggest that large pipelines are in profitability about the same as the small pipelines, and therefore there is no presumption that they are less competitive than the small pipelines.

That concludes my statement.

Senator STEVENS. Thank you very much, Mr. Mitchell. That is very interesting.

[The statement follows:]

STATEMENT OF EDWARD J. MITCHELL, PROFESSOR OF BUSINESS ECONOMICS, UNIVERSITY OF MICHIGAN

Mr. Chairman and members of the committee, I appear before you today on behalf of the Association of Oil Pipe Lines (AOPL) to discuss why oil pipelines

should no longer be subject to price or rate regulation by the Federal Energy Regulatory Commission. My remarks are based primarily on research I conducted for AOPL on competition in the oil pipeline industry. My report entitled "A Study of Oil Pipeline Competition," has been submitted to the Committee for inclusion in the record of these hearings. My comments today will therefore merely summarize what I conclude from that study.

With the ongoing deregulation of airlines, railroards and trucking it might seem at first glance that oil pipeline deregulation is just another in a series of attempts to return the transportation sector of the American economy from the heavy hand of bureaucracy to the efficiency of the marketplace. This characterization would be totally misleading. Unlike the airlines, the railroads or trucking, the oil pipeline industry has not been burdened by highly restrictive regulation. Oil pipeline companies do not require a certificate of convenience and necessity to construct a new pipeline or to extend or shut down an existing line. There has always been freedom of entry and exit. Regulation has not imposed maximum or minimum prices or rates, or restricted oil pipeline profitability, either through floors or ceilings.

The purpose of the legislation before us is to ensure that oil pipelines remain in the unregulated sector, except for the provisions of the Interstate Commerce Act prohibiting discrimination among shippers. Since the transfer of regulatory authority over the industry from the ICC to the FERC there has been a continuous attempt to characterize oil pipelines as natural monopolies, subjecting them to cost-of-service pricing and the associated paraphernalia of public utility regulation. While a favorable decision by the FERC in the *Williams* case would ease the threat of rate regulation it would not eliminate it. If a particular commission and staff can seriously threaten to impose public utility regulation under the existing law, then even if that threat is removed by the current commission it would not necessarily imply permanent relief. Now that this fear is planted in the minds of the industry, all future decisions about pipeline investments, which will last 50 or more years, will be affected unless the threat is once and for all exorcised by legislation.

What makes it easier for Congress to act on this issue is that it will not be moving from the known of regulation to the unknown of the market as it did in the other transport industries. Rather it will be insuring a continuation of a past characterized by growth of the pipeline network, increasing economies of transport, competition, and profits in line with risk. What we can expect then is more of the same, and therefore the only issue I perceive is whether a continuation of the past is what we want in the future.

The most important question regarding the past is whether the industry has been competitive and can be expected to remain so. There is presumptively no reason to regulate the prices of a competitive industry.

The following evidence supports the competitiveness of oil pipelines:

Pipelines typically face a number of rivals. In the 59 largest metropolitan areas, those served by at least one product pipeline are served by an average of 1.6 local refineries and 3.0 product pipelines, a total of 4.5 independent competing entities (allowing for the fact that a few of the refineries and pipelines are commonly owned). In addition, about 90 percent of the population of these cities has access to water transportation. The cost of moving oil by barge and tanker is in about the same range as the cost of moving oil by pipeline. Thus, we find that within the United States 48 percent of all refined product and 41 percent of all crude oil were moved by water in 1979. This does not include movement of foreign oil into the United States, which would be two and a half times this much again.

The barge and tanker industries are highly competitive and can be characterized as atomistic, that is, the largest firms account for a very small percentage of total capacity. (The oil industry as a whole owns only 13 percent of the barge capacity and 20 percent of the tanker capacity.)

Thus, a product pipeline would normally face substantial competition even if it were the only pipeline serving a particular market.

In the few cities over 500,000 that are not served by water transport the average number of local competing entities (refiners plus product pipelines) is 5.4, somewhat larger than the number serving cities with water access.

There are, of course, places where the number of rivals is less than average. I have investigated all those cases where a single product pipeline serves a community of 500,000 or greater. In most of these places water transport of gasoline and distillate represents a large fraction of local consumption (at least 43 percent and 34 percent, respectively). In the other cases there are either a large number of local refineries, or a combination of actual or potential competition that suggests little or no potential for the exercise of monopoly power.

I have examined pipelines collecting crude oil in areas representing 98 percent of the lower 48 domestic production, and refinery centers representing 92 percent of lower 48 refinery capacity. Looking at either the average, or the "worst" cases, from a competitive point of view I find again little or no potential for the exercise of monopoly power by oil pipelines.

In all I examined 182 market niches and found that oil pipelines typically face substantial competition.

One may ask whether very small consuming markets not covered by my study might be more likely to face monopoly power. This seems improbable. By and large product pipelines are designed to take oil from major refining centers to major consuming centers. Because of the small volumes moving to small markets, pipelines are generally uneconomical in those markets and distribution is instead carried out by truck from major pipeline terminals. An exception would be where a pipeline passes through a small community on its way to a larger one, and where the small community has sufficient volume to justify a local terminal. In this case, even if the pipeline in question did not face competition from competing pipelines or from water transport, it would be subject to the long haul-short haul clause of the Interstate Commerce Act which requires that rates to terminals along a line be no more than rates to more distant terminals on the same line. Thus, the force of competition in the major markets will also be transferred back to smaller markets along the line.

The effects of oil pipeline competition show up in the profit statistics of the industry. The delivered average rate of return on total capital for the industry is close to the average of all manufacturing industries. Statistical estimates of the risk faced by oil pipeline companies also place them in the category of about average. However, unique institutional circumstances in the pipeline industry, notably, the extreme debt financing in the throughput guarantees induced by the Elkins Act Consent Decree, cause the traditional statistical estimates of risk to understate the risk to owners of oil pipelines. Thus, I would characterize the industry as being above average in risk. The combination of average profits and above average risk is consistent with the prevalence of competition.

An argument can be raised as to whether the profitability of the industry is normal because the ICC, the FERC, or the Elkins Act Consent Decree has held profits down. My analysis of the profit data shows no evidence that the ICC or the FERC has constrained industry profits. And cases where the consent decree may have significantly constrained profits appear to be uncommon. Thus, the profits and tariffs that we observe are due primarily to competitive conditions, not regulation.

The belief that pipeline rates should be regulated derives from the theory of natural monopoly, which states that unlimited economies of scale lead to a single firm dominating a market. While it is true that oil pipelines involve technical economies of scale with respect to pipe diameter, the various assumptions needed to get from that fact to monopoly are not valid in the case of oil pipelines. Most markets are served by several oil pipelines. And if pipeline scale were a major determinant of competitive standing in the industry, it should account for an appreciable fraction of the widely varying company profit rates. It does not. At most, scale, as measured by pipe size, explains only a very small fraction of the varying degrees of success that pipelines experience. Rather, it would appear that building the right sized line in the right place at the right time with the right package of service is what determines success.

The oil pipeline industry is competitive now, but what about the future? Certain technical and economic facts make it likely that the level of competition will grow, as it has continually done in the past. First, pipelines are durable. Some pipelines laid before the Standard Oil divestiture in 1911 are still in operation, and many active pipelines are more than fifty years old. Second, operating costs represent less than half of total costs. Thus, a pipeline could with time turn out to be a poor investment for the owner yet still be more economical in operation than shut down.

Because the attrition rate of old pipelines is so low new pipelines have been added at a rate more than ten times as great as the rate at which old pipelines have been retired. Between 1968 and 1979 less than 3 percent of pipeline capacity (as measured by barrel-miles) was retired. And because new pipeline companies have entered at a significant rate the pattern of ownership of pipelines has been becoming increasingly diversified with time. The share of the 4 largest pipeline owners in total industry capacity has been falling at the rate of 5 percentage points per decade for about 3 decades, and is now at about 30 percent.

Since the technical and economic conditions underlying this trend are still in effect the expectation is that the pipeline industry will become only more competitive with time.

Senator STEVENS. Ms. Kamm.

Ms. KAMM. Thank you, Mr. Chairman. I am delighted to be here on behalf of the Independent Refiners Association of America. I will summarize my statement, but I would like it to be printed in full in the record.

The Independent Refiners Association represents small and independent oil refiners across the country. They range in size from 5,500 barrels of throughput a day to upward of 175,000. They share the common characteristic that they do not have their own source of crude production. Some are in fact owners of pipelines or participate in pipeline consortia. Nonetheless, as refiners, they share in the concern that the refinery industry as a whole runs a very severe risk of price escalation, should the entire pipeline network be deregulated. That is the subject of our concern today.

As you know, about 87 percent of domestic crude oil travels by pipeline, and half of all oil products. Oil pipelines are far and away the cheapest means of transportation, because they have inherent efficiencies that allow them to provide low-cost service.

It is true in some cases where there is excess capacity that it may be possible to lease throughput at reduced rates but this is the exception and not the rule. Our refiners to the greatest extent possible rely on exchanges and other ways to reduce their cost. We do not believe that they have an opportunity for any further efficiencies through the use of exchanges.

Mr. Chairman, I am well aware of the work that this committee has done in the area of transportation deregulation. In my tenure as general counsel to the Department of Transportation, I worked with the committee on air, air cargo, truck, and rail deregulation. I am firmly convinced that this situation is quite different in its very nature. The reason for that, Mr. Chairman, is that as a general rule pipelines possess monopoly characteristics unlike the air and truck experiences. In those circumstances we were firmly convinced, and I think correctly so, that there was a real downward pressure on rates because of the opportunities for new entry.

That is not the case in the pipeline area. Even without the requirement for a certificate of public convenience and necessity to build a pipeline, there are extremely high barriers to entry, right-of-way issues, State and local regulation, the expenses of a line. Moreover, since the cost of pipeline operation decreases over time and there are significant economies of scale to a pipeline. If a pipeline is sized correctly, it is going to serve the market. There is not going to be an opportunity to bring in another pipeline.

We are aware that there is some truck, barge, and tanker transportation. As a general proposition, that is not the transportation of choice because pipelines can deliver the goods much more efficiently. In 1981, a Colonial Pipeline report, for example, indicates that despite decreasing demand, their throughput has remained relatively constant because companies, when they have the opportunity, switch from other less efficient means of transportation to the low-cost pipeline transportation.

I must say also, Mr. Chairman, that I have been interested in Mr. Mitchell's testimony, in which he concludes that rate regulation has not created a downward pressure on rates, and that they are competitive rates. If that were the case, I fail to understand

why the pipeline industry would be in here clamoring for deregulation in order to be able to get a higher rate of return, but in fact the pipeline industry has been getting a rate return that is relatively comparable to other industries, and we do not see a particular need to deregulate this industry. It is not in the kind of situation where the railroad industry, for example, was under the system of rate regulation where they were unable to earn an adequate rate of return.

Truck transportation does not fill the gap. Only 4 percent of the ton miles travel by truck, and that is because truck transportation is only really feasible over very short distances. Trucks move products to local markets.

The fact that Mr. Mitchell would tell us that in a city of 500,000 population or above there may be several pipelines entering at some point or several competing modes of transportation is little help to the refiner who is at the end of one of those pipelines. The refiner simply has the kind of investment that does not allow him to move to another place to take advantage of these terrific opportunities. Thus, while we think that there is a very significant role for the independent refinery industry to play, that role would be severely jeopardized by pipeline deregulation.

I would like to address the question of the antitrust laws and how effective they might actually be. Frankly, we do not see them providing very much relief under the bills as put forward. FERC would retain discrimination responsibility, and we assume that that would preclude the ability to go to court under the antitrust laws, because the field would be occupied by FERC. However the antidiscrimination provisions of the Interstate Commerce Act absent rate regulation provide very little relief at all.

For example, we think it is possible for the pipelines to set their rates so as to force the wellhead price down and have a very high transportation cost. In those circumstances the integrated refinery can take its profit at any point in the production chain. The independent producer will take a serious drop in price, but the transportation cost may be the same, as is the cost to the independent refiner. We question whether FERC would have any jurisdiction to deal with this situation in which people who have basically unequal market power are treated equally.

In the same manner, we think that if, as Mr. Baxter suggests, the antidiscrimination provisions are also removed, that it is going to be very difficult for the person who faces this kind of competition. The Elkins Act is not available to private litigants, and the Government has used it infrequently certainly, if at all. The Robinson-Patman Act does not deal with services such as these, and we do not see that we would be able to do very well under other existing statutes.

In fact, we think that FERC regulation is probably the best alternative. We would like to see FERC get on with the cases before it and set reasonable standards. Congress should then take a look at the FERC decisions and see if they reach a fair and equitable result.

You have heard some discussion, and I do not want to take a great deal more of your time, on the windfall profit tax. There is no question that the Federal Government may lose substantial tax

revenue under these proposals because of the potential for adjusting the price of the transportation relative to the wellhead tax. While we understand that the IRS has the ability to look behind common ownership, there is a lot of crude oil that moves by pipeline that is not owned by the integrated producer. As to that oil, should the wellhead price be forced down the windfall profit tax and any State severance taxes on that oil will not be collected.

That concludes my statement, and I would be delighted to answer any questions.

[The statement follows:]

STATEMENT OF LINDA HELLER KAMM, ON BEHALF OF THE INDEPENDENT REFINERS ASSOCIATION OF AMERICA

Mr. Chairman and members of the committee, I am Linda Heller Kamm, counsel to the Independent Refiners Association of America (IRAA). This Association, which has been in existence since 1949, represents a score of small and independent oil refiners across the country. We are furnishing separately to the Committee a list of IRAA Members.

The Refiners who are members of our Association vary in size from 5,500 barrels of throughput per day to upwards of 175,000 barrels per day. All share in the characteristic that they do not have their own source of crude oil production. Some are owners of connecting pipelines or share in corsortia which have some ownership interest in pipelines. However, they recognize, on the whole as refiners, that their possible economic gain from pipeline ownership is more than offset by the risk of severe escalation of oil transportation costs should the entire pipeline network be deregulated.

Independent refiners rely heavily on oil pipelines for transportation of crude and refined petroleum products. As you know, 87 percent of domestic crude oil and half of all oil products are moved by pipeline. Over 227,000 miles of crude and product pipelines criss-cross the country, carrying almost 25 percent of intercity freight. Oil pipelines play this essential role in the transportation of crude oil and product because their inherent efficiencies permit them to provide low cost service while still making a good profit. It is true that there may be some opportunities for competition on rates in those circumstances where multiowner pipelines have excess capacity and those owners may be willing to reduce rates for leased throughput. But that is clearly the exception and not the rule. In general, there is little point-to-point competition and for most pipeline users, there is no competition at all.

Our Association is firmly committed to deregulation where it is appropriate. On a personal note, as General Counsel of the Department of Transportation from 1977–80, I participated in efforts to reduce governmental economic regulation of the airline, rail and truck sectors of the transportation industry. Thus, I am very familiar with the arguments that generally support transportation deregulation. The Independent Refiners Association of America, which I represent here, is a firm supporter of cutbacks in unwarranted governmental interference in the marketplace. However, pipeline deregulation raises a host of problem issues which we would like to address here today.

There are circumstances where Government must exercise appropriate regulatory functions. Generally, under our system of free enterprise, the regulatory authority of the Government must protect the American consumer and business from abuses of monopoly power. Independent oil refiners, in most instances, are not in a position to restrain pipeline owners as they exert monopoly power. The public interest therefore requires some continuing governmental ratemaking authority.

The antitrust laws, absent fedeal rate setting authority, would not be adequate to protect the public. The various proposals now before the Committee which distinguish between regulation over rates and regulation over discrimination make little sense. At the same time, we do not see that small and independent refiners or their consumers would be in a position to effectively prevent abuses by resort to the Sherman and Clayton Acts.

The Independent Refiners Association of America shares a concern that the current regulatory forum is not regulating pipeline rates as effectively as it should. However, we believe that continued FERC jurisdiction with effective Congressional oversight would be infinitely preferable to the chaos and confusion that could result from hasty legislative totally up-ending the current regulatory structure.

We would like to make a number of specific points:

1. *As A General Rule, Pipelines Possess Monopoly Characteristics.*—Pipeline construction requires high initial capital costs. Even without any requirement for a certificate of public convenience and necessity to build a pipeline, there are high barriers to entry. Right of way issues, and state and local regulation coupled with the expense of a new line severely limit the incentives to build any thing more grand than a connector. Moreover, the costs of pipeline operation decrease over time. Due to significant economies of scale, one pipeline, if sized correctly, has the ability to serve most of the market.

Very few pipelines compete point to point. A shipper who needs to move crude oil to a given location cannot be satisfied that a so-called competitive pipeline delivers crude oil 70 miles away. Nor is there solace in the fact that a product pipeline serves the market. A refiner has an enormous capital investment in plant and equipment and cannot relocate to take advantage of a better transportation rate to another place.

Truck transportation doesn't fill the gap. Only 4% of oil ton-miles moves by truck. Over any distance truck transportation is uneconomic. Further, transfer costs to have oil travel those last few miles by truck are unnecessary and prohibitive.

We are not impressed with the claim that the absence of a certification requirement or finding of public convenience and necessity makes it easy to enter the field. It's not like buying a truck or two. There are thousands of trucks, airplanes and railroad cars which can be moved quickly to new markets if rates for a competing service become excessive. However, it is extremely difficult to build a new pipeline. Not only are the costs high, but currently existing pipelines can employ various methods of making such an investment inappropriate. Since pipeline service lives are long and the costs of operating them are low, old fully depreciated pipelines can be operated profitably with far less revenue than a new line. Thus a new pipeline runs the risk that an existing pipeline may cut its rates after investment in the sunk costs of a new line but before its start up. Moreover, since many oil fields have a limited useful life it may not be economic for a new line to move into an area already served by an existing line. Under deregulation, entry barriers could be even greater than at present because prices for service would be more subject to manipulation.

2. *Deregulation Would Not Keep Prices Down.*—It is a threat of new entry or the actual event itself that creates downward pressure on price. Airline and motor carrier deregulation coupled rate freedom with removal of artificial barriers to entry. New services have indeed sprung up and the markets can be said to be working competitively. However, as noted above, in the oil pipeline business, government has not been the barrier to entry. If anything, the existence of government regulation has assured a fair break for new pipelines.

There is no evidence that deregulation will lead to major new competitive pipelines or even to competition on the existing pipelines. We are aware at times there may be overcapacity on certain multiple-owner pipelines. Those competitors who hold the right to move throughput on a particular pipeline may be willing to lease space at competitive rates. Further research into that possibility should be undertaken. However, even if that should be the case, it represents but a portion of pipeline usage.

Because rate freedom can be an essential tool in thwarting incentives to develop new pipelines, deregulation can lead to major fluctuations in transportation costs in certain areas. On hearing of plans to build a new pipeline, an existing pipeline, which has low overhead costs and the other indicia of monopoly noted above, can simply reduce its tariffs in the short term, albeit on a nondiscriminatory basis. Once the potential entrant gives up on the investment, rates are likely to return to the levels which prevailed before the threat of new entry.

3. *Antidiscrimination Provisions, By Themselves, Are Unlikely To Prevent Market Abuse.*—Various bills before this Committee which end FERC jurisdiction over ratemaking while continuing its discrimination authorities are impractical and will not serve to prevent discrimination. Suppose, for example, a vertically integrated pipeline raises its tariff by one dollar a barrel for a given transportation segment, both to the integrated shippers who have their own crude production and also have an ownership interest in the pipeline, and to non-owner shippers. The owner-shippers can then reduce their wellhead price accordingly. For the owner-shipper the price of oil delivered to the refinery is the same. The profit center has merely shifted from the wellhead to the pipeline. For the non-owner shipper, the new price of crude oil delivered to the refinery is a real price increase and not merely a paper transaction. Would this be discrimination remediable by FERC or merely rate setting beyond the jurisdiction of FERC?

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For the most part, owners of major pipelines are integrated companies, whether acting through a multi-owner venture or independently. They have enormous market power and the flexibility to take their profits at various points in the production-transportation-refining-marketing chain. The small or independent refiner does not have the same options. Therefore, one must address the question of whether treating such unequal entities equally, i.e., by charging them the same rate for the transportation, is really equitable, or is perpetuating discrimination. We think that absent a just and reasonable rate standard, FERC will find questions such as these very difficult indeed to answer.

Other examples come to mind. Suppose that a vertically integrated pipeline restricts its services so as to carry only volumes over a certain minimum and does not permit batching in quantities useful to small and independent producers or refiners. The independent producer may thus be compelled to sell to the pipeline owner at the wellhead rather than to the independent refiner. What recourse, we wonder, would the independent refiner or producer have?

4. *The Antitrust Laws By Themselves Would Not Meet the Need.*—Private treble damage suits under the antitrust laws would not be the best way to deal with likely abuses of monopoly power in the oil pipeline industry. Such proceedings are lengthy and costly. They will have the likely result of replacing administrative regulation with new regulation by litigation. Moreover, the Robinson-Patman Act is of no help since it does not apply to services.

Fully articulated administrative standards developed in formal proceedings would be by far the better approach. In the instant circumstance, it is hoped that the decisions in the *Williams* and *TAPS* cases will establish standards to guide the industry in setting just and reasonable rates. FERC is now under Court order to rule in the *Williams* case by the end of October. If the Congress is dissatisfied with the outcome of these cases, it can then evaluate whether legislative changes in the rate regulation provisions of the Interstate Commerce Act are necessary to provide ratemaking guidelines for FERC in order to reach a fair and equitable result. This approach, which builds on the experience and record to date, would be far preferable to starting out anew by substituting private antitrust litigation for public regulation.

In addressing this issue, the Committee should also consider the appropriateness of bringing before the already overburdened federal district courts a welter of complex litigation in a new subject area.

5. *Evasion of the Windfall Profits Tax Is A Serious Risk Under Deregulation.*—As noted above, integrated pipeline companies can reduce the price attributed to their crude oil at the wellhead and make up the difference in the pipeline charges. The federal government may lose substantial tax revenues as a result. The integrated producer-pipeline owner-refiner would have the same delivered costs at the refinery as before the pipeline rate increased, but would actually increase its after-tax profits.

Moreover, price manipulations of this sort can dramatically reduce state severance tax revenues. We understand the State of Alaska has some concerns with respect to its state severance tax, which, like the Federal windfall tax, is a percentage of the nominal wellhead sales price. We suggest that the Committee take a hard look at this question in light of its budget implications.

In sum, IRAA does not see a good reason for the present legislation which would immediately and totally deregulate pipeline industry rates. We note that under the regulatory scheme pipeline rates are lower than alternative forms of transportation. This recognizes their efficiencies. At the same time, pipeline companies are earning rates of return that are in line with other industries. New construction, where warranted by demand, is going forward without fear that competing older lines will be able to engage in pricing techniques that dampen new investment incentives.

Continuing pipeline regulation is in the best interest of the American consumer. The case for deregulation is not convincing and we urge the Committee to reject the measures before it at the present time.

Senator STEVENS. Thank you very much.

Mr. Blum?

Mr. BLUM. Mr. Chairman, I very much appreciate the opportunity to appear here this morning.

I am the general counsel of the Independent Gasoline Marketers Council, which is a trade association of nonbranded independent retailers of motor gasoline. Council members buy gasoline in cargo and pipeline tender quantities from refiners. A number of council

members who are also among other things terminal operators, ship product on the major product pipelines.

I subscribe in general to the points that Ms. Kamm has raised this morning on behalf of the independent refiners. Our concerns are very similar. I think there are some points that I should underscore which may help you understand our problems.

This issue has at least an 80-year history. The Standard Oil trust was put together by the Rockefeller family through control of transportation from Cleveland refineries to New York City markets. We have had an antitrust experience with oil pipelines that goes along for at least 80 years. We have had proposal after proposal in the Department of Justice, usually squashed at the eleventh hour, that pipelines be divested because the power of the owners of the pipelines, in this case the joint ownership of major oil companies, to injure their competitors who are producers, their competitors who are refiners, and their competitors who are marketers, is enormous, and the way it works is very simple.

If you are an integrated company with monopoly power over a pipeline, you take the profits out of the pipeline in the form of dividends and you then put at a cost disadvantage everyone else who competes with you, be he producer, refiner, or marketer, and that is precisely the kind of concern that we have. If you doubt that there are cost advantages for pipelines of enormous dimension, I offer for the record the 1981 Colonial Pipeline report, which at page 13 shows over a period of 1 year the differential between waterborne competition and pipeline rates. It is about double to ship by water than it is by pipe, and we think any situation where you can have a 100-percent rate increase if the owner so desires is monopoly controlled. That is a pretty good working definition of monopoly.

But what we are very much afraid of is that a competitor who is also the owner of a pipeline will not want us to share his low cost in getting product into a market where we compete directly with him. This concern is not academic. In the merger pleadings that were put before the Federal Trade Commission when Gulf recently attempted to buy Cities Service, there was a considerable amount of material on the Colonial Pipeline, and in that material Gulf has a rather frank memorandum that explains how the expansion of the Colonial Pipeline would mean that as capacity increased, more competitors, namely, members of my association, would have access to the line, thus disrupting Gulf's product markets on the east coast.

There is an analysis in that material which I would like to have made part of the record, and which is in my statement. There is an analysis of how the other owners of the line would vote, and that analysis says in effect if you have a product market on the east coast, you will be disadvantaged severely by allowing other competitors into the line.

I submit to you that the problem is not one of giving these folks a rate of return that will increase investment. The problem is that there has been a sharp decrease in the demand for both crude oil and product, and what it means is more and more independents under existing law will have access to the pipelines, have access to low cost transportation, and will be able to compete in already

hotly competitive markets. What they would like to see is a decontrol that will permit them to raise our costs and limit our ability to compete.

I think that your concerns about the State of Alaska and the possibilities that the State of Alaska might not get its full royalties are exactly the concerns we have, because we as competitors are in exactly the same position as Alaska. Make no mistake about it, all this discussion of the many pipelines under regulation really boils down to pipelines jointly owned by the major companies. The largest of them is Colonial. And we are talking about a few other pipelines which are enormous in dimension and have tremendous impact on various markets.

Now, there may be some markets in the country where there is substantial competition. For every one of those, I assure you there is a major market where there is no substantial competition, and we are very much concerned that we be left to the tender mercies of our competitors with respect to rates in those markets, and we have absolutely no confidence that the Assistant Attorney General in charge of antitrust or the Federal Trade Commission will do anything at all in timely fashion to protect us against being ruined if those rates are increased and we are excluded from the pipelines.

Now, as far as wellhead pricing goes, 25 percent of America's crude oil is now moving through the Alaskan pipeline system, and with respect to that, there is a deduction for pipeline tariffs, and we think that the ability to play around with those tariffs will mean the ability to derive enormous cost advantages by taking revenue away from both the Federal Government and the State of Alaska, and therefore we think that under no circumstances can the TAPS line be deregulated.

Thank you for hearing me. I would be delighted to answer any questions you may have.

[The statement follows:]

STATEMENT OF JACK A. BLUM, INDEPENDENT GASOLINE MARKETERS COUNCIL

My name is Jack Blum. I am the General Counsel of the Independent Gasoline Marketers Council, a trade association of nonbranded independent retailers of motor gasoline.

Council members buy gasoline in cargo and pipeline tender quantities from refiners and many Council members ship product on the major product pipelines.

The cost of transportation on product pipelines and access to the pipelines are essential elements in the continued operations of independent marketers. We are, therefore, strongly opposed to attempts to deregulate petroleum pipelines.

Pipelines are by far the lowest cost method of moving petroleum products. Our association members tell me that the cost of shipping product by water is several cents a gallon higher than the cost of moving it by pipeline and that the cost difference has grown over the last several years because pipeline costs have risen at a rate lower than the rate of inflation. Water borne transportation is the next lowest in cost to pipelines.

The difference in transportation costs is especially large during the winter when tanker rates are higher and inland waterways are choked with ice.

Most of our members measure their profit, when they have it, in pennies. Recently because of predatory pricing by major companies and a steadily shrinking gasoline market, many companies have lost money and are struggling to survive.

The ability to ship product through the major product pipeline systems from the Gulf Coast refineries at regulated rates is a key factor in making it possible for independents to continue to participate in Northeastern and Midwestern markets. Paying the same transportation costs as the major companies means that independents buying product on the Gulf Coast can have the same delivered cost in the

major markets and can take advantage of their marketing efficiency to make a profit.

Independent participation in the market holds down the overall price levels and benefits the consumer.

If pipelines were rate deregulated, the cost of shipping product on the lines would rise to the level of water transportation. Independents would, in effect, have to pay their major competitors (where the pipeline is a major company joint venture) a monoply tax to move their product into competitive position. This would eliminate them as price competitors and effectively bar new independent entry.

Moreover, if independents became too price competitive for the majors, the majors would use pipeline rates to curb the competition by raising the pipeline tariff and forcing up competitors costs.

The problem of decontrol is especially acute in this time of declining petroleum product demand. As the majors ship less product to market, more and more space on the line opens up to independents who give up shipping by water and take advantage of low costs. This increases wholesale and retail competition.

This committee has been told that higher tariffs are needed so that investment in pipelines will increase. In fact, the decontrol is sought because there is overcapacity which the majors fear will lead to increased competition from independent marketers. They seek to control that threat by getting you to give them monopoly power over competitors' costs and the ability to discourage new entrants.

To make my case, I cite the Gulf Oil submission to the Federal Trade Commission in the Exxon case which surfaced in the Gulf/Cities Service merger fiasco. The FTC, you will recall, was concerned that the merged company would have veto power over the expansion of the Colonial pipeline.

The submission considers Gulf's position on expanding the Colonial pipeline.

It says:

"It is the belief by many in Gulf that Colonial opened up Gulf's marketing area to many competitors which without Colonial would probably not have entered. Also. fungible shipments and joint terminalling operations are contributing factors to putting many independent marketers into business throughout Colonial's service area with Gulf Coast product sources. Many in Gulf also think it could have done much better marketing its products without Colonial than it has with Colonial."

Following this statement, the submission continues:

"The effect of tariff increases on shipper-owners as a group has probably not been harmful since tariff costs are expensed and a portion of increased tariff is used to pay larger dividends."

These comments are the essence of the point I am making. As the use of a line by shipper-owners declines because of declining demand, more and more independents use the line and stop using expensive water transportation. If shipper-owners can raise the price, the independents will lose the cost advantage of the pipelines and the majors would make more money in the resulting controlled market.

In our view, that is what pipeline rate deregulation is all about and why it is unacceptable.

An alternative that this committee may wish to consider is pipeline divestiture. If the pipelines were divested we might in fact get additional pipeline capacity and additional investment because independent owners would not do a careful analysis of whether expansion would lead to more entry of competition in product markets. In fact, independent pipelines would welcome more independent shippers to expanded capacity so they can make more money.

Proponents of pipeline deregulation say that we independents would still have the protection that goes without common carrier status. That argument ranks with the idiotic discussions during the gasoline price and allocation control program. Some DOE people argued that it was possible to allocate product without price controls and vice versa.

The members of this committee understood at the time that price determines whether one can buy product as much as any other factor and that if the price is too high all the allocation rules in the world won't help. The same reasoning applies to pipelines and common carrier rules.

If the pipelines raise their rates, the independent shippers will be priced out of the market but the shipper-owners who will pay the higher rate will simply take their profit as pipeline dividends rather than at the retail pump.

Some members of Congress raise the argument that pipelines are not a monopoly and, therefore, should not be regulated. We disagree sharply. If ever there was a natural monopoly a pipeline is it.

In an unregulated environment, we believe that the owners of pipelines could more than double the tariff before feeling any competitive effect. The nearest com-

petitor, water transportation, is subject to the Jones Act and is hardly operating in a wide open free market environment.

Finally, the owners of a pipeline can expand their capacity enormously with relatively minor capital expense. This gives them the power to destroy anyone who begins to build a competing line.

Everything that I have said about product pipelines is true of the crude transportation lines as well, but I am sure you will hear more on that subject from our friends in the independent refining sector.

A special comment is in order on the one crude oil line in the country which must be rate regulated. The line I refer to is the Alaskan TAPS line.

The majors who built TAPS ran the rate base to scandalously high levels. You will all recall the investigation by the State of Alaska on this subject which uncovered massive payroll fraud. The shipper-owners then set tariffs at levels which would pay back the entire cost of the line in three to four years.

They then came to Congress and complained that the cost of transporting Alaskan crude was so high they should be given a special transportation deduction for transportation cost in the computation of the windfall profits tax. You gave them a special deduction for the pipeline tariff.

Of course, the cost of transportation was high. The shipper-owners set it high and paid themselves high dividends. The dividend money meant more for them and less for the State of Alaska in royalties and less for the Treasury in windfall profits tax. It has also meant that competing refiners could not get Alaskan crude at price levels which allow them to compete with the majors who were shipper-owners. In one case, an independent refinery proposed for the Port of Valdez could not operate when it became clear that the crude costs including transportation would make its output totally non-competitive.

The failure of FERC to set a rate has meant that the shipper-owners have had the benefit of lower overall costs and they are using the lower overall costs to drive independents out of business in the product markets where they are strong.

Both Arco and BP are selling product at retail units for less than the world market price of crude oil laid into competitors' refineries. Their product prices are in some cases six and seven cents a gallon below the wholesale "rack" price. This behavior is driving thousands of competing retailers out of business. If FERC set a TAPS tariff based on a reasonable rate of return, the ability of those companies to destroy competitors and take money from the treasuries of the U.S. and the State of Alaska would be limited.

If you decontrol TAPS, all the profit from the Alaskan oil province will go to the pipeline and the entire tax and royalty scheme will be undermined. The only companies which will be able to bid on new Alaskan leases will be shipper-owners and their bids won't be very high.

Strong pressure should be applied to FERC to decide the case as rapidly as possible so that the present situation is controlled.

Again, I wish to stress our opposition to pipeline rate deregulation in any form and to urge you to consider what really should be done, namely force the major companies to sell off the lines.

Senator STEVENS. Well, I do thank you all for your comments.

Ms. Kamm, your first statement was, you supported deregulation, but then I take it you are opposing this bill.

Ms. KAMM. That is right. I said that I supported deregulation where there were real opportunities for competition, and I do not believe that that is here the case.

Senator STEVENS. Mr. Mitchell, I would be interested in your comment about the impact of deregulation on the rate of return on pipelines. Did your study indicate that there would or would not be a relative increase if there is deregulation?

Mr. MITCHELL. My study suggests there would be no significant change. If you look at the profitability of the industry, it is extremely varied. It is not like that of a regulated industry. If you measure profitability on the basis that the ICC does, where it had put down these guidelines, you will see a distribution of rates of return would fall all over the place, well below the guideline, well above the guideline, and so on. If you look at them on a basis that

is comparable to other industries on a delivered rate of return on total capital, you find again the same kind of distribution, widely distributed about with an average rate of return.

So, what you have are distributions of rates of return among the companies that are characteristic of a competitive industry, and therefore there is no particular reason to believe that if there would be a passage of a deregulation bill, that there would be any significant change from that.

Senator STEVENS. Mr. Taylor, you have heard the administration witnesses this morning indicate there is a substantial segment in the pipeline industry that could be deregulated because competition does exist, but I have not seen any administration proposals yet, and I assume you have not, either, but what do you believe would be the position of your industry to their concept of what I would call partial deregulation?

Mr. TAYLOR. Well, actually, we are against partial deregulation, because based upon Mr. Mitchell's study, we feel that competition does exist within our industry, and further, when you get into the partial deregulation, what effect does it have on future pipelines? And you create a climate of uncertainty, and this is what exists in the industry today, is this climate of uncertainty, and this is why we are promoting economic deregulation, to try to get over that particular hurdle.

Senator STEVENS. Mr. Blum, you heard the statement of the representatives of my State, and they take the position that higher tariffs are going to produce lower wellhead prices, and lower wellhead prices are going to discourage production, and in the long run isn't your association interested in more production?

Mr. BLUM. We are, and we fundamentally agree that those tariff rates have to be regulated, and we believe that unless they are regulated, the only people who will be able to produce up there are the people who own the pipeline.

I think the central issue here is, we will talk about deregulation but make the producers divest themselves of any interest in the pipe, make the refiners divest themselves of any interest, and we are much more likely to get a reasonable competitive situation.

Senator STEVENS. Well, I do not know how we could do that. As I recall, there was not anyone else that was willing to put up the money but the owners of the production. As a matter of fact, we would not have that oil down here now if they had not put it up.

Mr. BLUM. Well, they put it up under conditions of regulation where they reasonably assumed they would be regulated, and I do not see any reason to deregulate them. If we cannot divest them, they have to be regulated or else the State of Alaska, the producers of oil in the lower 48, the independent refiners, and the independent marketers will all be driven out of business.

You have a critical pathway in this industry. The critical pathway is the pipeline. The pipeline is half as expensive as the nearest competing mode. If you let the guy who controls the pipeline, and historically those are the major companies and joint ventures, play that monopoly, we will all be out of business in short order, and I think it is that straightforward, and we have 80 years of antitrust history, hearings before this committee, investigations by the Department of Justice, and investigation by the Federal Trade Com-

mission, and proposals for pipeline divestiture legislation in this Congress as recently as 1974. I think you have to go back over that history and appreciate what it means.

When the independent sector realizes that legislation is moving along seriously, they will be in here to tell you they cannot live with it.

Senator STEVENS. Well, I just do not know who is going to build the next pipeline if we say this one is going to be divested after it gets operating. We look forward to many pipelines, as you know, in the State of Alaska, and I would think that we have probably 40 or 50 percent of the oil that is going to be produced in this country. I think back on the Baucus amendment which I think your association supported, and the net effect of that was to increase tariffs and not to reduce them. You increased the tax on the crude oil in terms of the application of windfall profit tax and the result of that was to increase the tariffs.

Mr. BLUM. We have a very specific problem with the transportation of Alaskan crude oil situation, Mr. Chairman, which is this. There are producers in Alaska which for sound public policy reasons perhaps have been given incentives to explore and develop the Alaskan fields. They are currently selling crude oil on the street in competitive markets around the country for less money than the world market price of that crude oil laid into a refinery.

What I am saying is, it is cheaper for certain refiners in this country to go to a gasoline station and buy product than it is for them to lay in competing crude oil at their refinery, and that kind of competitive situation is intolerable. As we read it, what is happening is, those companies have taken the subsidies designed to develop production in Alaska and they are using them to run us out of business on the street. We cannot live with that, so we go back into every one of the arrangements, every one of the tax arrangements, and ask questions about them, because we will not be driven out of business without some kind of effort to save ourselves.

Senator STEVENS. Mr. Blum, the net result of your comment would mean that you think your industry would be better off without the Alaskan oil. It is the Alaskan oil that has brought that world market price down in the United States, and it has been the only thing that has backed off foreign oil. I really cannot understand a portion of the industry that says that in order to meet a competitive advantage that a producer, refiner, distributor has, and they have that advantage without regard to where the oil comes from, that the thing to do is to find a way to suddenly start closing the tap on the Alaskan production, and the amendment you talk about, of course, in terms of windfall profit tax incentive to go into these areas of very high cost, has already brought us 60,000 barrels a day more oil. It has more than paid for itself already in the Kuparak Field.

Now, you have to take the position that your portion of the industry would be better off without that 60,000 barrels.

Mr. BLUM. We do not take that position at all, Senator. We take the position that we would like to see that oil sold on the open market. We would like to see the product that comes out of the refinery from that oil sold on the open market. We can only assume

that if a company can maximize profits by selling the crude oil or maximize the profits by selling the product at the wholesale level, but chooses rather to sell it on the street for less money, that it has one intent, and that is driving the rest of us out of business. And that is our problem. We are delighted to have that crude oil in the market.

Senator STEVENS. If lowering the prices to the consumer is driving you out of business, then we had better take a look at the competitive market price, because as a practical matter, look at the gas. We have got 12 percent of the gas supplied in the United States that remains in the ground because we do not have the money to bring it out in terms of the pipeline system. I just think that it is going to be unfortunate if the net result of an internal competitive problem as far as distribution is concerned will be the disincentive as far as the production of Alaska reserves, and that is the end result of it in our opinion, it has reduced the profits on the production of oil, it has reduced the incentive for future production of oil, the threat of the attack on the exemption from future production from the windfall profit tax, and an admitted incentive to go into those very high cost areas is sufficient to keep them out, as I think the industry is now worried about the changing rules of the game, and the whole concept of divestiture, of course, has been faced, as you indicated, and my memory is, it never got much support in the Congress, and it would be my hope that it never gets support, because coming from a state like I come from, unless someone is willing to put up the money to transport the product, no one is ever going to drill for it.

Mr. BLUM. Mr. Chairman, we share your concerns on the issues. Our problem is that we cannot get the antitrust laws enforced. Our people are being driven out of business. In the short run that may mean lower prices. In the long run it will mean higher prices.

We think that perhaps there very well should be subsidies for Alaskan production, but please, if subsidies are to be written, make sure they go back into Alaska and do not turn into a temporary gasoline bargain for some drivers in Los Angeles which last only as long as our members are in business.

Senator STEVENS. Maybe we can all agree that Alaskan production, increased production, probably will not come on in the market in any volume until past 1991 and maybe we can all join together and do away with the windfall profit tax at that time and help restore a little bit of the basis of competition that existed in the industry before the windfall profit tax.

I do hope there is still an agreement in the industry on that point.

Mr. BLUM. We have agreed and in fact testified before the Finance Committee opposing the windfall profit tax.

Senator STEVENS. That is my memory. I hope we will all get back together at that time.

Thank you all very much for your testimony. We appreciate it.

[The following information was subsequently received for the record:]

EXXON PIPELINE CO.,
Houston, Tex., October 14, 1982.

Hon. TED STEVENS,
Committee on Commerce, Science, and Transportation, Russell Senate Office Building, Washington, D.C.

DEAR SENATOR STEVENS: At the hearings on oil pipeline deregulation in the Senate Committee on Commerce, Science, and Transportation that you chaired on September 29, 1982, Mr. Jack A. Blum appeared on behalf of the Independent Gasoline Marketers Council and made certain allegations concerning the eight separate carriers operating in the Trans Alaska Pipeline System (TAPS). Exxon Pipeline Company believes that those allegations are unfounded and appreciates this opportunity to put its comments on the record as a supplement to the testimony of Mr. Kenneth P. Fountain.

Mr. Blum alleged that "The majors who built TAPS ran the rate base to scandalously high levels. You will all recall the investigation by the State of Alaska on this subject which uncovered massive payroll fraud." Mr. Blum is referring here to the "Report to the Alaska Pipeline Commission by the Commission's Special Counsel," ("Special Counsel's Report") dated August 1, 1977. This report was prepared by Mr. Terry F. Lenzner, who was retained by the Alaska Pipeline Commission to support the State of Alaska's adversary position in the *TAPS* rate case which sought removal of certain costs from the rate base to be used to determine just and reasonable rates.

This report was based on limited and unsubstantiated information. In a lawsuit styled *Alyeska Pipeline Service Company* v. *Houston Gamma Ray Co., et al.* (U.S. District Court, District of Alaska, A-76-89 Civil), the Defendants attempted to introduce the Lenzner Report as evidence. The TAPS Owners then noticed written interrogatories to Mr. Lenzner. In an attempt to avoid the taking of Mr. Lenzner's deposition by written interrogatories, the attorneys who were at that time representing the State of Alaska claimed that the report was of no probative value. In a letter dated December 13, 1978, the attorneys stated:

"Mr. Lenzner is an attorney. He is not an engineer and, of course, has no first hand knowledge of the events discussed in his Report. In a word, the report is necessarily based on hearsay. The report was made to—not by—the Alaska Pipeline Commission. Accordingly, we do not see how it would be admissible in evidence. . . ."

Moreover, the State of Alaska, in Phase II of the TAPS rate proceeding, disclaimed the report as a basis for disallowance of costs due to imprudent overruns. In its "Reply to Respondents' Brief on the Phase II Hearing Schedule," filed September 4, 1980, the State of Alaska said as follows:

"First, while the Alaska Pipeline Commission ("APC") investigation was adequate for its intended purpose, it does not provide the basis for the full and complete record required in this proceeding. Indeed, neither the State nor the APC ever has suggested that the documents and informal interviews obtained during a preliminary investigation conducted in just six months immediately prior to the completion of construction of TAPS are sufficient to justify disallowance of specific amounts from the TAPS rate base in this adjudicatory proceeding. The 'Report to the Alaska Pipeline Commission by the Commission's Special Counsel,' ('Special Counsel's Report') August 1, 1977, specifically highlighted the limitations of that inquiry.

"[T]his inquiry has been constrained both by the limited time and resources available and by severe problems encountered in obtaining the testimony of scores of witnesses and in examining, analyzing and compiling hundreds of thousands of documents under the control of Alyeska Pipeline Service Company, its owner companies and execution contractors."

The report that Mr. Blum relies on will not support a claim that the TAPS Owners "ran the rate base to scandalously high levels."

Mr. Blum also alleged that "The shipper-owners then set tariffs at levels which pay back the entire cost of the line in three to four years." Again, there is simply no basis to support Mr. Blum's claim. Indeed, Mr. Blum did not present any back-up data to support this allegation. However, one undisputable fact is that the eight TAPS Owners incurred their first capital expenditures in 1969, but it was eight years from that time before any of the TAPS eight Owners received the first dollar of revenues from transportation. Moreover, the record of the *TAPS* rate case reflects that the rate initially set by Exxon Pipeline Company included a component designed to recover its cost of investment on a straight-line basis over the economic life of the project which at that time was estimated to be 25 years.

Exxon Pipeline Company would urge this Committee and the Congress to pass favorably on oil pipeline economic deregulation, including the deregulation of the eight TAPS carriers with respect to their independent operations in the Trans

Alaska Pipeline System. As Mr. Barber has testified, competition and other related factors will keep the tariffs of the eight TAPS carriers at reasonable levels, making the continued regulation of TAPS unnecessary. We urge the passage of S. 1626 and the Printed Amendment No. 1239.

Very truly yours,

L. D. WOODDY, Jr., *President.*

Senator STEVENS. Our next panelists are Mr. Keith Bailey, the president of Williams Pipe Line Co., and Mr. Wendell C. Putman, vice president of petroleum operations for Farmland Industries. Gentlemen, I appreciate your being patient with us, too. We are happy to have your statements.

Mr. Bailey, you are first on the list, so you go first.

STATEMENTS OF KEITH E. BAILEY, PRESIDENT, WILLIAMS PIPE LINE CO.; AND WENDELL C. PUTMAN, VICE PRESIDENT, PETROLEUM OPERATIONS, FARMLAND INDUSTRIES

Mr. BAILEY. Mr. Chairman, I appreciate the opportunity to appear here today and to present my views on S. 1626. As I am sure you know, I favor passage of this bill and feel it is a piece of legislation that is long overdue.

In my prefiled testimony, I have addressed a number of the reasons as to why economic regulation is inappropriate for oil pipelines today. What I plan to do in my oral statement is to focus on certain of the key issues which you might examine as you consider this legislation.

It seems to me that competition, its nature, degree and scope, will be the principal determinant in this process. Having had the benefit of hearing or appearing in other hearings on this bill and on a companion bill in the House of Representatives, I know you will hear much discussion on the topic of competition. I also know that much of what you have heard and will hear is in my judgment totally irrelevant to the subject of oil pipeline deregulation.

You are faced with the challenge of separating those various descriptions of competition into competition that affects the oil pipeline's business and earnings potential and that which is more appropriately descriptive of competition in another segment of the industry, such as production, refining, or marketing. Obviously there is a certain amount of interrelationship in some aspects of the competitive environment, but we are considering oil pipeline deregulation today and it is the competitive impact on oil pipelines that seems to me to be relevant to these discussions.

An example of what I mean is described in my testimony where I discuss the competitive dynamics of crude oil exchanges. An exchange, as the name implies is simply a trade between two or more refiners or marketers which is designed to allow them to serve their desired markets at the least cost. It either eliminates the need for direct transportation or reduces it substantially.

In fact, a refiner-marketer need not even have direct physical access to a particular market, as the exchange provides that access. The example I use is one of a Coffeyville, Kans., refiner and a Minneapolis, Minn., refiner exchanging product in order to allow each to serve product demands in the other's locale.

As Williams Pipe Line provides service from Coffeyville to Minneapolis, certainly one option available to the Coffeyville refiner in meeting its Minneapolis needs would be to ship directly via the

Williams system. In that instance, the Coffeyville refiner would serve its market and Williams would enjoy the revenue associated with providing the transportation service.

When the exchange comes into play, however, Williams is eliminated from the transaction entirely. The Coffeyville refiner, however, continues to service market needs, presumably having eliminated the cost of transporting the product, and as a result, from the perspective of the refiner-marketer the exchange is an optimization device.

From the pipeline's perspective, however, it completely eliminates the need for pipeline transportation and is a major competitive factor. This is the type of situation you must weigh as you hear the competitive marketplace described. In the example I just gave the impact of the same transaction on the pipeline is significantly greater than on the refiner-marketer, and I feel it is the impact on the pipeline that is material to today's discussion.

Another allegation that has been made is that the capital barriers to entry essentially eliminate the possibility of competition with existing pipelines. Again, in my testimony I describe one example of a directly competitive line being constructed in the face of an existing line which was both capable of and willing to provide the service offered by the new line.

Another example that might be useful to this committee is to contrast entry into the airline business with entry into the oil pipeline business. Since airline deregulation, a number of entrepreneurs have begun providing air service using small fleets of jet-powered airplanes. I have not heard any suggestions that capital barriers to entry have precluded this entrepreneurial entry into the airline business, and certainly the actual experience would suggest that it has not. In fact, I believe Ms. Kamm just agreed with that assessment.

Obviously, the size of potential markets is a limiting factor on the total number of new entrants, but that is true in any business. My point, and the analogy I want to draw, is that a DC–9 or a 727 costs approximately $22 million. In Williams Pipe Line's service area, $22 million would allow the construction of approximately 175 miles of 8-inch pipeline, and that pipeline would have the economic capacity to transport volumes equal to 10 percent of our total refined product throughout. That length of line would also allow even the most rural of the refiners connected to Williams to reach a major metropolitan market, which in turn significantly expands the exchange potential of that refiner, as well as substituting direct transportation services for that refiner's own market in that particular area.

As refiners typically have financial capacity far in excess of that enjoyed by many of those who have entered the airline business, capital barriers to entry would appear to be a very weak argument. It must be remembered that it does not require either a particular large-diameter line or a particularly long line to have significant competitive impact on an existing pipeline system.

The final area I want to touch on briefly is the suggestion that has been made that the declining petroleum demand of the past few years has eliminated the need for new pipeline systems. At no time in our history have the competitive pressures on our company

been greater. The reordering that is taking place in the domestic refining industry is causing massive shifts in the distribution patterns for both crude oil and refined products. As the logistical pattern changes, the need emerges for new transportation services.

Shippers are examining every aspect of their operation, and we have already seen some of the effects of this market reordering on our pipeline system and we would expect to see more in the future. I do not think our system is atypical in this regard. I think it is a characteristic that is generally true throughout the industry.

Competition is real in the oil pipeline industry, and if anything it is increasing. For the record, I would also like to note that under current regulation oil pipelines can and do offer contract rates. In listening to Mr. Baxter and Mr. Means, there appeared to be some confusion on that point.

That concludes my oral statement and, like the others, I would be happy to answer any questions that you might have.

Senator STEVENS. Thank you very much.

[The statement follows:]

STATEMENT OF KEITH E. BAILEY, PRESIDENT, WILLIAMS PIPE LINE CO.

Mr. Chairman, members of the committee, I appreciate the opportunity to appear before you today. Williams Pipe Line is an independent pipeline which has had the unhappy experience of being embroiled in the current regulatory morass for the past 10 years. I feel our experience gives us a very sound basis for being in the forefront of those advocating deregulation for this industry. In the interest of time, and with the indulgence of the committee, this written statement is intended to provided a complete record as to our views on this legislation.

Oil pipeline regulation had its genesis in 1906 at a time when the oil industry generally was in its infancy and a few large companies dominated the marketplace. The explosive growth of this industry has, without question, completely altered the structural characteristics of that marketplace and I feel it is fair to say that if there were no economic regulation of this industry today, you would find few, if any, advocates of imposition of such regulation.

That, however, is not where we are today and it is those of us in the industry who are the advocates of change. I am quite confident that the record which will be made in these hearings will make the case that economic regulation is no longer required for this industry and that, in fact, a continuation of such regulation carries with it the potential for serious harm.

Today's oil pipeline industry is an industry that is generally healthy and one which has historically served its clientele well. In spite of this, it has periodically been subjected to the criticism of various parties based on a variety of theories, but with no facts to support them.

Obviously, I am encouraged, along with my colleagues in the industry, by the fact that the Government witnesses, without exception, supported the underlying principles which form the foundation for this proposed legislation; namely, that this industry is one which should be deregulated and that the time is ripe now for such deregulation. What we are not as encouraged by is the obvious reluctance on the part of at least some of the Government witnesses to fully embrace the concept because of what best might be described as lingering concerns over potential problems which may or may not exist.

I suppose this is not surprising when one considers the history of our industry's involvement with these various agencies and the deeply embedded preconceptions which must be overcome before their unqualified support of this legislation could be expected. Many of the reports commissioned by or performed by various governmental groups have as their predicate the assumption that oil pipelines are in fact natural monopolies and they made no effort to examine the validity of that presumption. What is necessary in considering this legislation is an examination of all of the theories advanced about the fundamental character of our industry in the context of the real world data available by which to test those theories.

Our industry has been criticized for realizing excessive profits; however, an examination of this issue reveals actual profit levels have been quite ordinary, not at all out of line with those realized by industry generally, and if anything somewhat low

considering the risk characteristics of the industry. The testimony presented in the Williams phase I rate case before the FERC clearly demonstrated that the pipeline industry financial returns have been consistent with those of business and industry in general. As shown in exhibit 6, since 1966 the average of the oil pipeline industry's delivered return on total capital has been the same as that for the S&P 400.

We have been accused of deliberately undersizing our systems in a Machiavellian attempt to extract monopoly profits. Examination of the facts have shown this accusation to be totally without merit.

Certain lines have been subjected to intense antitrust scrutiny and divestiture of oil pipelines has been a rallying cry for many critics of the energy industry. Again, years of effort on the part of industry critics have failed to provide the basis to support a single antitrust case nor have they made the case for divestiture.

My purpose in reciting this litany is simply to make the point that while the few critics of our industry have been successful in creating a smoke cloud, they have consistently and unequivocally failed to produce any evidence of fire. There is a simple reason for that. The oil pipeline industry that exists today is one which has been shaped by intense competitive pressures. Its management decisions are made in that environment and its day to day operations are conducted in a way that reflects that reality. I want to emphasize the fact that this committee should deal in marketplace realities in considering this legislation.

During the course of your deliberations, you will undoubtedly hear textbook theories and classroom style solutions proposed by those few diehard critics of the industry and this is understandable. It is understandable because if their theories have any merit, which is questionable at best, it is only as a theory in the classroom. They cannot meet the test of real world analysis.

You have already heard a variation on the central theme of some of those theories as the issue of potential reregulation of certain carriers has been discussed. Again, let me emphasize that the issue of the need to include a reregulation provision in the legislation has been couched in terms of lingering concerns over potential problems which may or may not exist.

The administration has embraced the concept of reregulation and is now wrestling with the way in which this concept must be rationalized with the real world structure of this industry if it is to be workable. My own judgment is that they will ultimately abandon this effort as being impractical since they will be faced with creating an administrative framework that is large, complex and which grows in inverse proportions to the very limited concerns they are attempting to address through its implementation. Quite simply, I suspect they will come to the conclusion the game is not worth the candle.

Fortunately, this committee and Members of Congress are largely free from the necessity of overcoming preconceptions regarding this industry and therefore, can make objective judgments regarding the merits of this legislation. I am confident that as a result of that greater objectivity, you will judge the facts as supporting complete and unequivocal economic deregulation.

Let me now move on to some of the facts you will need in making that judgment.

The ICC, which had regulatory responsibility prior to the creation of the FERC, has been said to have exercised little, if any, regulatory control over the industry. In general, the ICC exercised a laissez-faire type of regulatory oversight choosing to intervene only when asked to do so by a party at interest. The performance of the industry under this style of regulation would bear out the fact that this was entirely appropriate.

One quickly senses, however, that the critics of the industry and the ICC prefer to focus their attention, not on the actual marketplace real world results of the industry performance, but rather on the esthetics of particular regulatory theories or methodologies. Two economists who in the energy law journal recently analyzed the current state of oil pipeline regulation perhaps best capture the theorist's difficulty with dealing in the real world. Peter Navarro and Thomas Stauffer, both Harvard economists, make the following observation:

"Ironically, while its genesis must be suspect, we shall see later that it functioned unexpectedly well. Its analog is the camel—cruelly designated as a 'horse designed by committee'; like the camel, the ICC formula actually proves reasonably efficient under a broad set of conditions."

In fairness, I would point out that Mr. Navarro and Mr. Stauffer proceed to go on and build their own version of a better regulatory mouse trap. They did, however, acknowledge the effective history of the ICC approach to regulation which encompasses all aspects of regulation including the administration of the regulatory process.

A fair question at this point might be, "Why is this legislation needed?" This industry is generally healthy, it has historically earned reasonable returns, it has served an important energy transportation role well and on a timely basis, and it has done so while being subject to the same basic laws that are now being considered for change in these proceedings.

The answer is simple. The past in this case is not a good predicate for the future. When jurisdiction for oil pipeline regulation passed from the ICC to the FERC in the fall of 1977, the entire regulatory climate changed. The FERC has proven to be an agency with a regulatory style which is the diametric opposite of the ICC's light-handed approach. It has created a significant backload of unresolved rate cases by suspending thousands of rate filings on its own motion. More importantly, in doing so it has heightened the regulatory uncertainty facing this industry, dampened the incentives to invest in pipeline assets, and created an administrative morass which will take years and millions of dollars of regulatory and litigative expense to resolve. Chairman Butler himself has expressed serious concerns regarding the great difficulty faced by the Commission in arriving at what they consider to be appropriate regulation under the existing statute.

If one can make the reasonable assumption that life under the FERC in the future will be similar to that which has existed during the past 4 plus years, there is no question in my mind that this spells disaster for this industry. Obviously, there could be an ebb and flow in regulatory zeal as administrations and commissioners come and go, but I feel there is little question that over time, you would see this industry transformed from one which has been efficient, effective, and willing to take investment risks, to one which is much less efficient or effective and which is highly risk averse. It is almost an article of faith that cost of service style regulators of whatever political persuasion with their 20/20 hindsight have little tolerance for "winners" even when the competitive marketplace makes it impossible for them to prevent or even help "losers."

In practical terms, what does this mean? It means some companies may elect to cease making capital additions and may, in fact, elect to get out of the industry. It means companies will allow latent demand to build to much higher levels before making investments and then only make the absolute minimum investment to serve that specific demand and not assume the risk associated with making provisions for potential growth.

All this will occur at the same time the business environment will be crying out for the industry to assume an even higher risk profile as exploration moves to frontier areas and the disruption caused in logistical patterns by the rapidly shifting refining market continues. Two studies issued in 1979, one by the Department of Energy and the other by the National Transportation Policy Study Commission, projected that the pipeline industry would have to embark on a massive capital investment program to meet the energy transportation requirements of this country in the future. Their estimates of $25 to $30 billion of additional capital through the year 2000 would require the industry to increase its gross investment by a multiple of its current $19 billion level. This new investment requirement serves to highlight the need to create an environment that creates rather than chills investment incentives. In other words, a continuation of the current status quo is anything but neutral; it is very much counter to our national interest.

I want to leave the negative aspects of the discussion for a moment, however, to focus on the affirmative reasons as to why it is entirely appropriate to support this legislation.

Williams Pipe Line and its operating environment is a good case study of this industry and it is the area I will focus the balance of my remarks on today. It also should allow us to move the discussion from the theoretical to the practical and that is where the issues should be joined.

You can see from the attached map (exhibit 1) [1] that the area served by Williams is interlaced with pipelines, refining centers, and waterways. Williams is subject to competition from these other lines, from refiner sales and exchanges, and from rail, truck, and barge movements of the various commodities it transports. Competition and what that means is, without question, the central issue to this discussion.

As you examine this question, you will find, as is usually the case, that the real world has many facets. What is viewed as competition by one party may be viewed as irrelevant by another. I will attempt to describe the market dynamics in a way that allows you to draw your own conclusions as to relevant competitive factors in regard to this legislation, and I will offer my own judgments as to what they are.

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[1] This exhibit was not reproducible and is in the committee files.

The most obvious aspect of competition which must be considered is that which affects the earnings potential of the pipeline because it is only the pipeline that is directly affected by this legislation. In the dialog before this committee, you will hear relevant competition defined from the perspective of a refiner, a marketer, perhaps a producer, but keep in mind each of these segments operate in an environment free of economic regulation. One question which should be addressed is whether or not continued regulation of a single segment of an industry might not, in fact, encourage inefficient allocation of resources in an otherwise unregulated environment. I think that question is best answered by examining the facts.

From Williams Pipe Line's perspective, competition is pervasive and it requires that we adapt to what is a continually shifting environment, in order to maintain a competitive position. Because of the complex dynamics that exist, the competition faced by our company and our industry defies simple explanations. Others at this hearing would have you believe that competition should be defined by looking at a narrow corridor between two points on the map and comparing published pipeline tariffs between those points. This is the grossest form of oversimplification, does not address competition for the pipeline as such, and in any event is far removed from the reality of the marketplace.

First, as is true with any product competing for consumer demand, pipeline transportation services are not valued in a single dimension by the prospective consumer. In addition to price, both the quality and range of services offered by the pipeline enter into the ultimate shipper decision. The challenge facing pipeline management is to find the combination of price, service, and quality that best fits the needs of the maximum number of shippers. It is only through this type of effort that maximum earnings potentials can be realized.

In Williams' own case, we feel we must attempt to position ourselves at the high end of the service curve. It is this strategy that we feel best meets the needs of our shippers. This strategy also allows us, as an independent pipeline which exercises no control over any of its volumes, to successfully compete with the other private, shipper-owned, and independent lines in our area as well as the variety of other transportation modes and alternatives to transportation.

Our organizational structure reflects that service based orientation. We have a marketing organization headed by one of the company's three vice presidents, as well as a customer service group whose only role is to provide day to day assistance to our shippers. This is hardly an organizational structure that suggests an attitude of indifference to our shippers' needs.

In the area of operating expenses, we have also been very successful in our efforts. From a work force of 827 people in 1966, we have reduced complement to a level of 679 by year end 1981. At the same time, we were substantially expanding service levels and the geographic scope of our operation.

There are other aspects of Williams' stewardship of this company that also reflect the competitive pressures facing us. As cost pressures have forced us to increase tariff levels, we have had to develop computer programs which analyze our competitive position on a county-by-county basis. Any tariff change creates a risk of business loss because it changes the competitive dynamic that controlled business levels prior to that change. As a result, tariff increases are the last avenue explored by management in our efforts to achieve a reasonable return for our stockholders.

I have attached a graph (exhibit 2) which plots the CPI, our average transportation revenue per barrel, and our average operating expenses per barrel for the period from 1966 when Williams acquired the system to 1981. This also plots our tariff to Grand Forks, N.D. which is the most distant point on our system. From this it is clear that our revenues have only gone up in proportion with our expenses and that both have risen at a rate which is only three-fourths of the rate of inflation as measured by the CPI. It seems obvious to me that our demonstrated ability to only raise tariff levels in line with actual cost increases and our need to constrain those cost increases to less than the general rate of inflation are not suggestive of any level of monopoly power over our shippers. Rather, it clearly demonstrates the influence of intense competition we face in the marketplace.

A second graph (exhibit 3) which focuses on the decade of the seventies even more clearly demonstrates these realities. This is a period characterized by very high inflation, particularly in energy costs which are our single largest expense. Williams sought its first tariff increase in 1970, some four years after it acquired the pipeline and we have had to periodically seek additional increases as these cost pressures have grown over the past decade. Average tariff revenue during this period grew at a 5.6 percent compound growth rate compared to a CPI growth rate of 8.4 percent. Because energy costs grew at a 19.4 percent compound growth rate during the period, we were only able to control operating expense increases to 93 percent of the

general rate of inflation. Even with this rate of cost increase, competitive forces combined to constrain our average tariff increases to 75 percent of the general rate of inflation and 80 percent of our rate of cost increases. This obvious inability to have tariffs keep pace with costs is a clear indication of the competitive pressures facing Williams pipeline.

Because of these competitive realities, the avenues we explore first in our search for earnings growth opportunities are the seeking of new markets, cost reductions and productivity gains.

Since 1966, Williams has spent $183M in maintaining as well as expanding the system and the services it offers. We have pioneered the movement of liquid nitrogen fertilizer solutions by pipeline. We were the first pipeline to offer service based on the batching of crude oil and refined products in the same line. We were among the leaders in offering gasohol at our terminals and we continue to experiment in the movement of commodities which would be new to cross-country pipelines, such as alcohol and various chemical and refinery feedstocks. We have put in place sophisticated computer and telecommunications equipment which provide our shippers the state of the art in data collection and inventory control.

One aspect of this investment is of particular interest and is worth examining in a little more detail. As you can see from the attached map, Williams is directly connected to a number of refineries. Our basic refined products operation takes product from these refineries along with other sources and delivers that product through truck loading terminals. The demand at those loading terminals is determined in large part by their competitive reach in relation to other sources in the area. Williams has consistently done so even though at times were convinced that the refiner was misjudging their own requirements. The obvious question then is why make that type of investment. The equally obvious answer is to preserve our existing level of business. There is, as I'm sure you by now know, complete freedom of entry and exit in the oil pipeline business. If a refiner's own projections indicate a requirement for lifting capacity from their refinery and if Williams fails to expand to meet that demand, the refiner will undoubtedly do so himself. If that happens, they will construct facilities to capture all existing business as well as the expected growth and Williams will be left with an idle line which has little or no economic value. In that sense, we are truly captive to the desires of our refiner-shippers.

A good case in point is our history of providing service levels to Farmland Industry's Coffeyville, Kansas refinery. Williams has expanded its capacity several times at farmland's request as shown in the table below.

Year	Barrels per day	
	CRA throughput	Williams capacity
1974	23,000	25,000
1975	25,200	44,000
1976	28,100	44,000
1977	28,600	44,000
1978	32,400	61,000
1979	31,600	61,000
1980	26,300	61,000
1981	28,300	61,000
1982 YTD	25,400	61,000

Williams made these capacity increases without the benefit of any firm throughput commitments on the part of farmland because we are fully aware that farmland has the financial resources to meet its own capacity needs if it appears Williams is not doing so and doing so at competitive rate levels. It now appears that Williams will realize little if any benefit from these capacity expansions as Mapco pipeline has completed an extension into Coffeyville (exhibit 4) [2] and will provide 15,000 barrels per day of refined products capacity out of the refinery. Farmland, in supplemental testimony filed with the Senate Energy Committee, indicated that they have provided Mapco firm throughput commitments for its use in spite of the obvious willingness of Williams to provide this service, not to mention Williams significant past investment which provided it the ability to do so.

[2] Ibid.

The argument will probably be advanced that it is hardly realistic to assume a refiner would duplicate the Williams system in order to distribute their own products. Again, the answer is simple in that they would not have to duplicate Williams' physical system in order to effectively achieve the distribution potential it offers. Even those refiners which are located in rural areas are a fairly short distance from major metropolitan areas. Simply by extending to those metropolitan areas and/or entering into product exchanges with other refiners, they can achieve the effective distribution provided by the Williams system.

Exchanges are perhaps one of the most difficult of the various competitive factors to describe because the range of options is so great. It is important to examine the impact of exchanges on the pipeline as well as the flexibility they offer the refiner. Farmland, in its testimony, in the Senate presented a chart which was apparently intended to describe the range of options available to it in supplying three different markets in Iowa, Minnesota, and North Dakota. The only two options they presented were a combination of Williams pipeline and trucks and direct trucking. While these are options they certainly are not the only two nor are they necessarily the best ones available. Where exchanges come into play, the refiner/marketer, farmland in this case, can add economic choices to meet its market needs and each of these choices will have a different impact on Williams pipeline.

For example, Minneapolis might be supplied by any of the following ways which are only some of the realistic alternatives available to them.

One, they could enter into a refinery exchange with either Koch or Ashland, both of whom have Twin Cities refineries. In that exchange, Koch or Ashland would supply farmland's requirements in the Twin Cities while farmland supplied their requirements at Coffeyville. In that instance, farmland instead of facing the Williams pipeline tariff of 2.87 cents per gallon plus the outbound trucking cost of 1.06 cents per gallon would in fact only be paying the outbound trucking cost thus reducing their ultimate shipping cost and in the process completely eliminating Williams' participation.

Two, they could exchange with Amoco which has a pipeline service the area from its Mandan, N.D. refinery. Again, Williams is completely out of the picture.

Three, they could exchange with any of several companies which have terminals on the Mississippi River again completely eliminating Williams' involvement.

Four, they could exchange with other refiners on the Williams system which are located closer to Minneapolis and who, as a result, enjoy a lower tariff structure. In this instance, Williams' revenue potential would be reduced, but not eliminated entirely.

Obviously, there are many other variations and permutations possible including straight crude oil processing agreements, choices as to which refineries to utilize in which markets for a multi-plant refiner, like farmland, and crude for product exchanges, but the point is that the refiner/marketer has many options available to achieve their objective. Each alternative has a direct competitive impact on the pipeline and Williams has no direct control over that process. It is only through effective competitive pricing and service decisions that Williams is even able to influence the end result.

You can see from this, the balance of market power clearly lies not with the pipeline but with the shippers and refiners and that is a very effective real world competitive constraint on our business. I happen to agree completely with the D.O.E. statement that entry barriers to this industry are relatively low and that potential entry is a strong competitive force. I go even further and state that from an independent pipeline company's perspective, the overwhelming balance of market power lies with the shipper.

Sometimes the most obvious answer is the best answer even in so complex a subject as the one we're addressing today. As I pointed out earlier, the ICC has historically regulated this industry on a loose fitting earnings guideline basis. The rate base was the pipeline valuation which is a form of fair value rate base as opposed to a net original cost type of rate base. The ICC guideline for Williams is a 10 percent return of valuation. The simple facts are: (1) Williams' valuation is exactly the same as if Great Lakes had never sold the pipeline and had made the same post 1966 investments as Williams has made; (2) Williams went approximately four years before it made any change in the tariff structure; (3) Williams has never achieved the guideline return of valuation permitted by the ICC and in most years has been at only a fraction of that (see exhibit 5 attached).

My question to you is what possible reason could Williams have had to earn less than guideline returns in every year of its ownership of the pipeline other than the fact it was forced to do so as a result of the competitive realities of the marketplace. The suggestion that deregulation would in some way allow Williams to increase its

rates beyond these competitive limits is also ridiculous as it is also obvious that Williams rate levels have never been constrained by regulation.

Obviously, I could continue to cite example after example of the competitive nature of our industry and Williams' own operating environment. Simple business prudence doesn't allow me to discuss some of the more specific details on a public record which is readily available to my competitors in the marketplace. What I hope my testimony will do is provide you the real world results by which to judge this industry. I think you will agree with me that those results reflect the effective workings of the competitive marketplace and that this industry's vitality and the nation's best interest will both be served by passage of the proposed legislation without the need for some reregulation provision.

I thank you for your time and attention and will be happy to answer any questions you may have.

EXHIBIT 2

COMPARISON OF WPL REVENUES AND EXPENSES
WITH NATIONAL INFLATION
(1966 = 1.0)

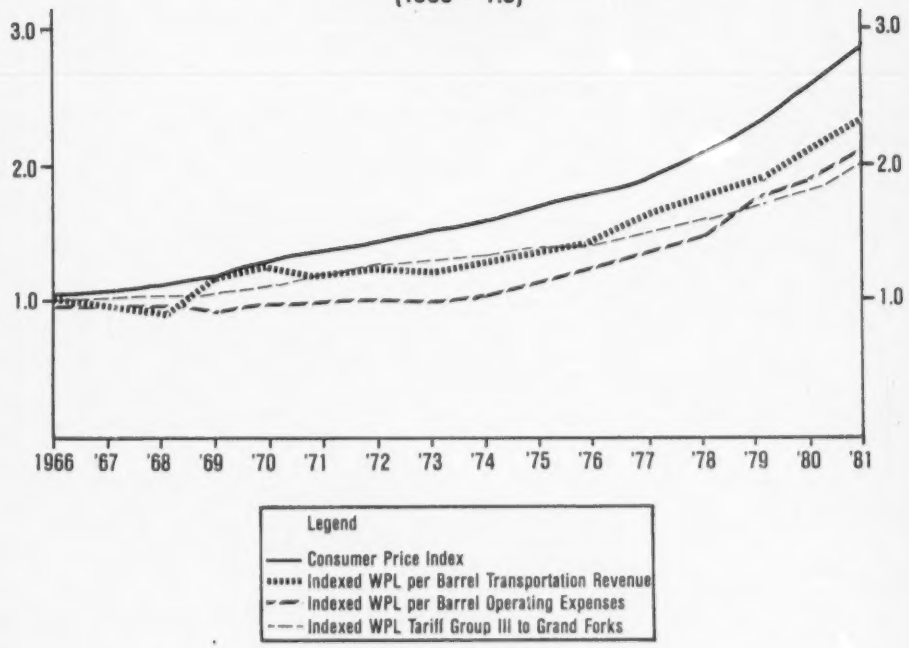

3.0
2.0
1.0
1966 '67 '68 '69 '70 '71 '72 '73 '74 '75 '76 '77 '78 '79 '80 '81
Legend
Consumer Price Index
Indexed WPL per Barrel Transportation Revenue
Indexed WPL per Barrel Operating Expenses
Indexed WPL Tariff Group III to Grand Forks

EXHIBIT 3

COMPARISON OF WPL REVENUES AND EXPENSES
WITH NATIONAL INFLATION
(1970 = 1.0)

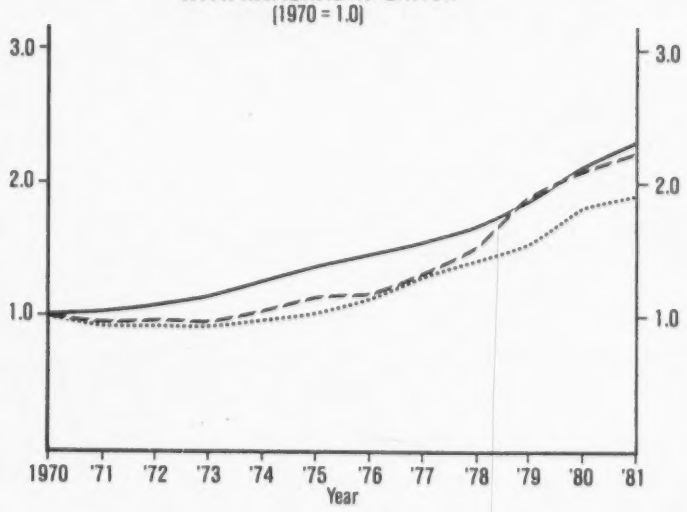
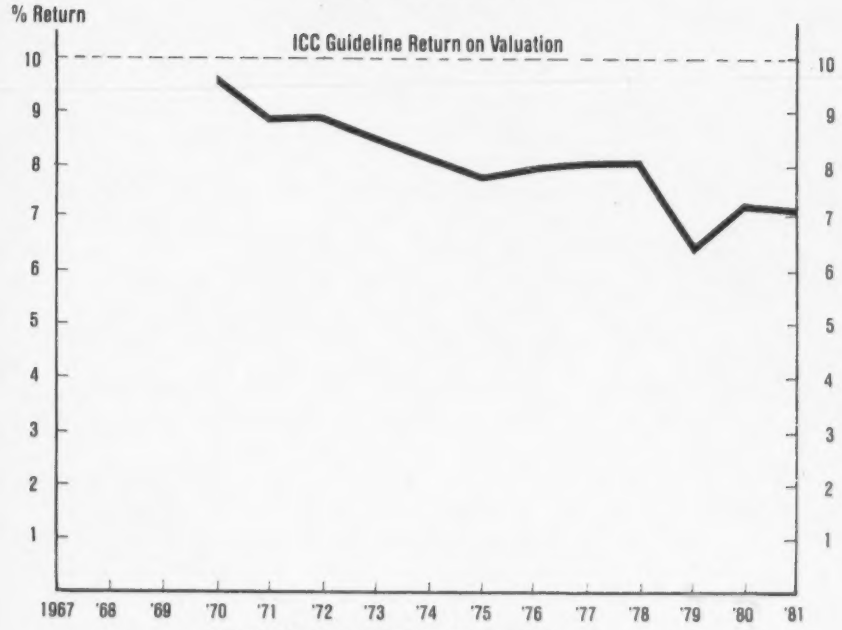


EXHIBIT 5

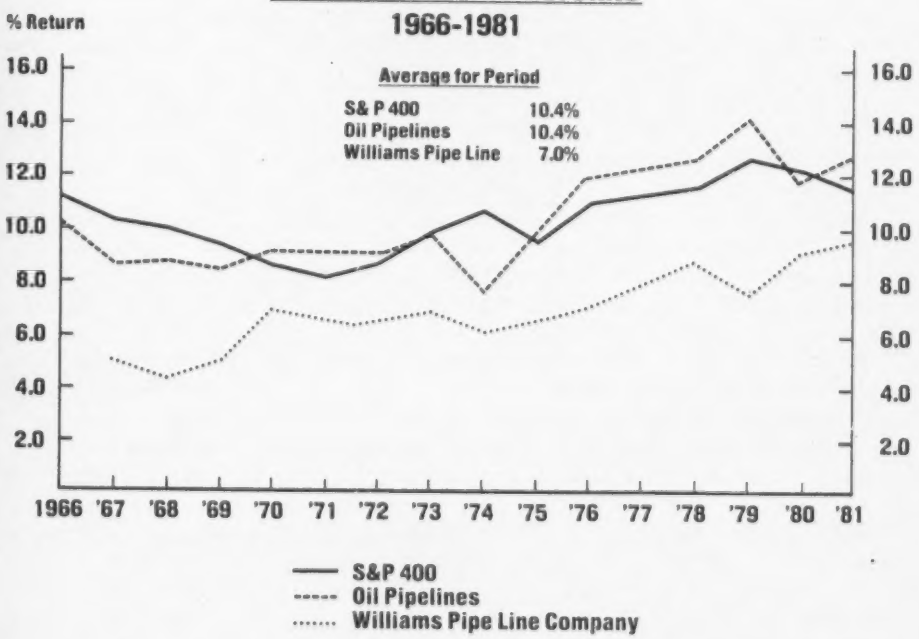
Williams Pipe Line Company
Return on Valuation



Note: No valuation determined for 1967 thru 1969

EXHIBIT 6

MEDIAN DELEVERED RETURNS
1966-1981



Senator STEVENS. Mr. Putman.

Mr. PUTMAN. Thank you, Mr. Chairman. I am very pleased to be a part of your review of petroleum pipeline deregulation activities, and I thank you for the opportunity for Farmland Industries to express our opposition to removal of rate control authorities. The prospect of discontinuing restraints on pipeline rates is a leading business concern to us.

Farmland Industries is an agricultural cooperative owned by 2,300 local cooperative associations in 19 Midwestern States. Through these local associations, Farmland supplies 500,000 farmer owner-members with fertilizer, agricultural chemicals, petroleum products, feed, equipment and supplies, and other materials supplied to agriculture.

In much of Farmland's Midwest service area, there is no effective alternative to pipeline transportation for large volumes of crude oil or petroleum products from point to point over long distance. Product exchanges are being maximized at every location and large volumes of fuels must be moved from source to end user each day. Pipelines are simply so efficient in this type of transportation that no other type of transportation mode is available at competitive cost.

The first chart before you will show comparative transportation costs as they existed as of April 15 of this year. Transportation charges for delivery of gasoline from a Coffeyville, Kans., refinery to the Farmers Elevator Co. at Bondurant, Iowa, are 3.11 cents per gallon. This is comprised of 2.18 cents per gallon for pipeline from Coffeyville to Des Moines, Iowa, and nearly 1 cent per gallon for truck transportation from pipeline to destination at Bondurant.

Truck transportation of gasoline from Coffeyville to Bondurant would have been 9.13 cents per gallon, or almost three times the present amount of transportation involved in delivery to the farmer's elevator. This is a difference of almost 6 cents per gallon.

Two other examples are on the chart showing transportation charges for delivery of gasoline from our refinery in Coffeyville to the Farmers Union Oil Co., at East Grand Fork, N. Dak., and to markets near Minneapolis, Minn. In these examples the cost for transporting by truck would be at least four times greater than the cost with optimum use of the available pipeline system.

The differences in cost are the rule and not exceptions. There are certainly hundreds of similar situations that could be cited. A similar discussion could also be related concerning rail rates. In each of the three examples cited, rail transportation costs are very similar to truck rates and also three to four times the cost of pipeline transportation. It is also interesting to note that there are no economic water routes available for movement of product from Farmland's refinery to the destinations cited in the examples.

Farmland Industries does participate in exchanges. However, exchanges do not move product. Exchanges provide very little net savings, since the exchange differential is based upon pipeline transportation costs. As pipeline rates increase, exchange differentials likewise increase. And as I mentioned earlier, exchanges are already being used to the maximum extent possible and do not have the potential of eliminating or diminishing our use of the pipeline systems.

The point to be made is that pipeline transportation rates could double or even triple and economic forces would still dictate that fuel movement would be made by pipelines. There is no economic alternative in much of the Midwest.

The next chart is a map which shows the pipelines which Farmland Industries sees as true common carrier refined fuel pipeline systems within Farmland Industries' area of operation. Analysis of this map indicates that in actuality there is little or no competition between pipelines in our trade territory.

Currently, Farmland Industries ships refined fuels in only three pipeline systems: The Williams system, the Kaneb system, and the Sun system. Each of these pipelines serves a separate, distinct geographic area of our trade territory and each is the only economically effective carrier for movement of product into the area that it serves. This has been illustrated by an overlap which portrays the corridor through Iowa, Minnesota, Wisconsin, Illinois, where the Williams pipeline system is the only economically feasible common carrier for moving fuels into that area from the Coffeyville refinery.

Similarly, a second overlay shows a corridor through Nebraska and the Dakotas where the Kaneb pipeline system is the only economically feasible carrier for moving fuels from Farmland's refineries. As you can see with the overlaps in place, the Williams system is the only choice available to us for transporting fuels from our refinery to the destinations that were shown and discussed with the first chart.

Pipelines have been called natural monopolies, and I believe that my comments and certainly my experience supports that description. Whatever terminology is used, the fact remains that with few exceptions the pipelines used by Farmland Industries have no competition for shipment of fuel by Farmland.

The absence of free market alternatives makes regulatory control of pipeline rates very necessary. We believe the goal of regulation should be to establish rates that are just and reasonable, which approximate as closely as possible the rates which would be in effect and would result if there were effective competition in a free market.

That concludes my remarks. I certainly appreciate the opportunity provided to us to share with you some of the concerns of the farmers and ranchers who own Farmland Industries.

[The statement follows:]

STATEMENT OF WENDELL C. PUTMAN, VICE PRESIDENT, FARMLAND INDUSTRIES, INC.

Mr. Chairman and members of the committee, I am Wendell C. Putman, vice president of petroleum operations of Farmland Industries, Inc. We appear here in opposition to Senate Bill 1626. Farmland Industries is an agricultural cooperative owned by 2,300 local cooperative associations. These local associations serve their 500,000 farmer owner/members in 19 midwestern states. Farmland Industries, Inc., owns a refinery at Coffeyville, Kansas, with a refining capacity of approximately 60,000 barrels per day. We have two other refineries. Our Scottsbluff, Nebraska, refinery (5,600 barrels per day) was closed effective June 1, 1982, and our Phillipsburg, Kansas, refinery (26,400 barrels per day) will be mothballed indefinitely effective October 15, 1982. The primary purpose of the Coffeyville refinery is to serve the needs of local member/owner associations of Farmland Industries and, in turn, the farmers and ranchers who are member/owners of those local cooperatives.

I am sure you don't need to be reminded that the agricultural sector of the economy as a whole is under extreme economic pressure. The agricultural producer has for the past few years seen the cost of his inputs rise dramatically without a corresponding increase in the price of the agricultural products in the marketplace. This has been good for the consumer, but the farmers and ranchers have been caught in a severe cost-price squeeze.

An unjustified increase in the cost of inputs for agricultural production such as petroleum products is of great concern to Farmland and the 500,000 agricultural producers we serve.

Energy costs are a significant percentage of the total production cost of many foods. For example in late 1981 energy costs were over 22 percent of the farm price of a bushel of corn. It requires a great deal of energy from petroleum products to produce the food which we are so used to having in bountiful supply. Even a relatively "small" increase in the price of petroleum products translates into large dollar-cost increases for the farmers and ranchers.

Those who have pressed for deregulation of pipeline rates argue that the pipeline transportation cost of crude oil and oil products is small—that only 4 percent to 5 percent of the delivered price of petroleum products is for pipeline tariffs. We have heard the transportation tariff portion of the consumers' cost described as de minimis. Farmland is not presently taking issue with the 4 percent to 5 percent figures relied on by proponents of the legislation. We do, however, very strongly disagree with characterizing 4 percent or 5 percent of the price of petroleum as de minimis. Farmers will tell you that 4 percent or 5 percent on their cost of fuels is significant to them and can make the difference between profit or loss.

We also do not think a 3.6 percent decline in the consumer prices in March is de minimis. According to the April 26, 1982, Wall Street Journal, the March decline was caused in large part by a 1 percent drop in transportation costs, which reflected a 4 percent drop in the price of gasoline. All of these percentage figures are significant numbers, and all are equal to or less than the 4 percent to 5 percent relied upon by proponents of the legislation, and which they would like you to consider as de minimis.

In Farmland's fiscal year ending August 31, 1981, we paid approximately $36 million in pipeline tariffs. Obviously, even a small percentage increase in pipeline tariffs translates into large dollar figures which ultimately the farmers and ranchers have to pay.

Proponents of the legislation would like you to believe that there is no need for concern about excessive increases in pipeline rates—that intermodal and intramodal competition will determine the rates—that free market factors will keep the rates at reasonable levels. If there were free market factors at work, we would agree that they should be used. However, the pipeline transportation available for products in much of our 19-state marketing area does not have the attributes of free market.

In spite of the efforts of some to persuade you that there are a large number of different types of transportation alternatives for oil and petroleum products, there are in Farmland's midwest service area no effectively competitive transportation alternatives for the transportation of large volumes of oil and petroleum products from point to point over a long distance. Pipelines are simply so efficient in this type of transportation that no other transportation mode is available at competitive costs.

We don't deny that within a limited radius of our Coffeyville refinery, perhaps 50 to 75 miles, truck would be competitive with pipeline rates. This represents, however, a very small portion of capacity. Trucks are not, for a much more significant delivery area, a competitive transportation alternative for shipments from our Coffeyville refinery to Des Moines, Iowa—or to Minneapolis, Minnesota—or to Grand Forks, North Dakota as shown by Exhibit 1. Exhibit 1 compares transportation charges as of April 15, 1982. Transportation charges for delivery of gasoline from our Coffeyville, Kansas, refinery to the Farmers Elevator Company at Bondurant, Iowa, are 3.11 cents per gallon. This is comprised of 2.18 cents per gallon for pipeline to Des Moines, and 0.93 cents per gallon for truck transportation from pipeline to destination at Bondurant. Truck transportation of gasoline from Coffeyville to Bondurant would have been 9.13 cents per gallon, or almost three times the present amount of transportation involved in delivery to the Farmers Elevator. That is a difference of almost 6 cents per gallon.

Another example is the transportation charges for delivery of gasoline from Coffeyville to the Minneapolis, Minnesota area. The transportation charges for delivery to destination are 2.87 cents per gallon for the pipeline and 1.06 cents per gallon for truck from pipeline to destination, for a total of 3.93 cents per gallon. If it were necessary to truck the gasoline, the transportation would cost 15.44 cents per gallon, or

nearly 4 times the transportation charge if the pipeline is used. That is a difference of approximately 11.5 cents per gallon.

I'd like to give one final example of transportation of gasoline from Coffeyville to Farmers Union Oil Company at East Grand Forks, North Dakota. The pipeline transportation to Grand Forks is 3.62 cents, with truck transportation from pipeline to destination of 0.97 cents for a total 4.59 cents. This compares with a charge for transportation by truck of 20.38 cents or nearly 4½ times the cost if the pipeline is utilized. This is a difference of more than 15 cents per gallon to Farmers Union Oil Company. These examples all show that truck transportation does not provide effective competition for pipelines and does not in any way operate to restrain pipeline rates.

These examples are the rule and not exceptions. These are just a few of hundreds of other similar situations. It is also worth noting that in each of the above examples the destinations are within 20 miles of the pipeline and the trucking charge for just that distance is a significant part of the combined pipeline and truck transportation charges.

There are no river routes available for barge transportation for any of the above examples. Essentially barge transportation is, with rare exception, nonexistent west of the Mississippi and east of the west coast and certainly doesn't exist for our Coffeyville refinery. There is no indication that water transportation in any way limits pipeline charges in our trade area.

Rail rates are somewhat more difficult to compare. First of all, we would have to purchase or lease rail cars in order to haul the product. Rail rates are much closer to truck rates than to pipeline rates, as can be seen by comparing the following rail rates to destinations which approximate those in Exhibit 1. Rail rates from Coffeyville to Des Moines, Iowa, are 8.910 cents per gallon. Rail rates from Coffeyville to Minneapolis are 11.418 cents per gallon. Rail rates from Coffeyville to Grand Forks are 14.322 cents per gallon. The rail rates in each case are about four times the comparable pipeline rate. In addition, most of our local associations do not have bulk plants on rail sidings and would therefore require truck transportation from the railroad to their facility so a total transportation charge for delivery to destination would be greater than the rail rates alone. Perhaps the best indication of the lack of effective competition provided by rail carriers is the fact that in 1976 they accounted for only 1.4 percent of the tonnage of petroleum products.

Accordingly to the Williams Companies' 1981 Annual Report, Williams Pipe Line transported 172 million barrels of crude and product during 1981. This would be the equivalent of approximately 780,000 transport truckloads or 312,700 rail tank car loads. It is obvious that trucking and rail facilities and capabilities are inadequate to handle the volume of crude and products presently transported by the country's pipelines.

Farmland Industries does participate in exchanges; however, exchanges do not move product. Products from most refineries, including our Coffeyville refinery, must be transported beyond the immediately surrounding area. For example, there are no refineries in Des Moines, and all petroleum products sold and used in Des Moines and central Iowa must be transported there from refineries located elsewhere. The vast majority of Farmland's 2,300 member associations, and the 500,000 agricultural producers they serve, are not within 50 to 75 miles of a refinery. Recent refinery closings have further limited exchanges. Finally exchanges provide very little net savings since there is usually an exchange differential which is based upon transportation costs. As pipeline rates have increased, exchange differentials have likewise increased.

It is claimed that one way for alternative pipelines to be made available is for a shipper to build its own pipeline or pipelines. The capital cost of constructing a new pipeline system is large. Such an investment is not likely to be made in a new pipeline paralleling an existing pipeline if the capacity of the existing pipeline is sufficient to meet the demand. Also, by looping, an existing pipeline can almost always expand its capacity at less cost than constructing a completely new pipeline because of advantages such as already having the right of way and fewer environmental constraints. The existing pipeline will almost always be able to charge lesser rates than a new parallel system would have to charge. Such a new parallel pipeline system could be built only if it had sufficient assurances that shippers would continue to use its services even though the existing pipeline charged lower rates. On the other hand, a new pipeline could be built if the demand sufficiently exeeded the capacity of an existing pipeline and the existing pipeline was unable or chose not to expand its capacity. In that case, however, the new pipeline is not built to compete with the existing pipeline, but rather to provide additional service justified by additional demand.

In addition to the economics, there are other difficulties facing the construction of a new pipeline. Some of the obvious ones include the expense of obtaining right-of-way, especially in the case of small diameter long-distance pipelines. Another obvious difficulty is the satisfying of environmental concerns. While these difficulties would be faced by any new pipeline, they further illustrate the advantage an existing pipeline has over any proposed new parallel pipeline, especially where the capacity of the existing pipeline is sufficient to satisfy an existing demand or where capacity of an existing pipeline can be expanded to meet increased demand.

Specifically, with regard to Farmland Industries, it is unreasonable and not economically feasible for Farmland Industries to build a pipeline that would have any substantial effect on its overall transportation requirements. We simply are not in a position to replace any significant part of the existing pipelines we use with our own pipeline system. In addition to the above restrictions, a pipeline sized to meet only our requirements throughout our marketing area would not be big enough to provide the economies of scale which are characteristic of larger pipelines and which are enjoyed by the pipelines we are currently using. Without such comparable economies of scale, a Farmland Industries pipeline could not compete with an existing pipeline. Furthermore, the efficiencies of the economies of scale would be lost to the farmers and ranchers served by our members and would be lost to the economy as a whole.

The proponents of pipeline rate deregulation often point to various pipeline maps to demonstrate the vast number of pipelines throughout the country. At first glance, a products pipeline map such as shown in Exhibit 2 [1] does make it appear that there is a competitive situation on pipelines, but I think that we must look at such a map in more detail. This map includes pipelines for transportation of propane and other natural gas liquids, pipelines for anhydrous ammonia fertilizer, pipelines for coal slurry and the Bureau of Mines helium pipeline. Of the remaining pipelines, many are owned by refiners who use them as part of their distribution system with connections from their refineries at one location to their pipeline terminals at other locations, and these pipelines are not available for shipment of refined fuels by Farmland Industries or other non-owner refiners.

The map which we have produced as Exhibit No. 3 shows the pipelines which Farmland Industries' Supply and Distribution Department generally found are true common carrier refined fuel pipelines within Farmland Industries' area of operation. Analysis of this map indicates that in actuality there is little or no competition between pipelines. For all of the examples on Exhibit 1, the Williams Pipe Line is the only choice available to us for pipeline transportation of our products from our refinery to the various destinations.

Farmland Industries' refinery at Coffeyville, Kansas (in the southeast corner of the state), is connected to the Williams pipeline, which efficiently transports refined fuels north to Kansas City, through Iowa and Minnesota, into the Dakotas, Illinois, Wisconsin and Nebraska. As can be seen from this map, the Kaneb Pipeline also transports refined fuels from Kansas refineries north through Nebraska and the Dakotas, in addition to serving a small portion of northwest Iowa.

Mapco is nearing completion of construction of two new pipelines between our Coffeyville, Kansas, refinery and El Dorado, Kansas. These will be a four-inch connection to Mapco's LPG system, and a six-inch connection to Kaneb's refined fuel system. The four-inch line coming into the refinery will transport butanes and natural gasoline to meet refinery needs. The six-inch outgoing line will move gasoline, distillates, diesel fuel and propane into Kaneb's system. It is our hope that use of the Kaneb pipeline will enable us to continue to supply the demand of our members which previously had been met by using primarily our Phillipsburg, Kansas, refinery which will soon be closed, and our Scottsbluff refinery which has been closed. This new connection to the Kaneb pipeline will not materially influence our use of, nor reduce our dependence upon, the Williams pipeline system.

There are a few very limited areas in which there are alternates of using Williams or Kaneb for serviceing certain areas, but these are a minor portion of the area served for us by either Williams or Kaneb. Our experience during the past several years has been that periodic increases by one of these two pipelines were soon followed with similar increases by the other pipeline, so we don't feel that we can anticipate that "competition" between the two pipelines would be much of a restraining influence without regulation. As can be seen from the map, Exhibit 3—The Chase Pipeline from Eldorado, Kansas, with supply terminals in western Kansas and at Denver, Colorado, has no competition in servicing that area with product from Kansas and Oklahoma refineries. The Wyco Pipeline supplies Denver

[1] Exhibits 2–7 were not reproducible and are in the committee files.

from the Wyoming and Montana area. The Chevron Pipeline has no competition from Salt Lake City to terminal points in Idaho. The Yellowstone Pipeline is the only pipeline available from Billings, Montana, for servicing western Montana, as well as other points. The Cenex Pipeline is the only pipeline available from Billings, Montana, to eastern Montana and North Dakota. The Sun Pipeline is the only pipeline available from Oklahoma refineries for servicing points in Arkansas and West Memphis, Arkansas.

Anhydrous ammonia (fertilizer) pipelines operate under the same regulations as petroleum pipelines. Availability of pipelines for movement of anhydrous ammonia is very restricted. As can be seen from Exhibit 4, the Mapco Pipeline, which connects to our producing plant at Enid, Oklahoma, transports product into Kansas, Nebraska, Iowa, and Minnesota. There is no economic alternate to this pipeline to transport Enid production into the northern areas. The Gulf Central Pipeline, which connects to our Pollock, Louisiana, producing plant, moves product north into Missouri, Illinois, Indiana, Iowa, and Nebraska. Similarly, there is no economic alternate to this pipeline movement.

As can be seen from Exhibit 5 reflecting common carrier LPG pipelines, the availability of these pipelines is quite limited. We have no economic choice but to use the Mapco Pipeline for transportation of purchased propane from west Texas, New Mexico, the Oklahoma panhandle, or southwestern Kansas producing plants which is to be distributed through local co-ops to farmers in our northern marketing areas. The only economical means of transporting propane produced in Alberta, Canada, into our marketing area is the Cochin Pipeline.

We are in a similar captive position on point-to-point movements of crude oil. We do own some gathering systems, as well as some short pipelines which are connected to our refineries. For most of our crude oil supplies we must make connections with other pipelines which are owned by other oil companies who are our competitors in purchasing crude oil from crude producers, as well as in selling petroleum products in the marketplace.

We recognize the risk factors attendant to building new peiplines. We have an interest in the Seaway Pipeline which was completed in 1976 from Freeport, Texas, on the Gulf Coast to Cushing, Oklahoma. With the slackening of demand for petroleum products during the last few years and the subsequent lowering of dependence on foreign crude, the usage of this line and resultant profitability has been less than anticipated.

It has been claimed that Coffeyville-refined products are delivered to the consumer through a large network of products pipelines. That is not the case and, in fact, we are a shipper only in Williams, Kaneb, and Sun. Each of these pipelines serves a separate distinct geographic area in our trade territory, and each is the only economically effective carrier in the area that it serves. This has been illustrated on Exhibit 6 which portrays the corridor through Iowa, Minnesota, Wisconsin, and Illinois where Williams Pipe Line is the only economically feasible common carrier for transportation of refined fuels from Kansas and Oklahoma refineries. Similarly Exhibit 7 shows a corridor through Nebraska and the Dakotas where Kaneb is the only economically feasible carrier for transportation of refined fuels from Kansas refineries.

Pipelines have been called natural monopolies, and I think the above facts and certainly my experience supports that description. Whatever terminology is used, the fact remains that, with possible minor exceptions as described above, the pipelines used by Farmland Industries have no competition for the Shipments by Farmland and do not compete with each other. It is because of the absence of a free market that regulatory control of pipeline rates is necessary. We believe the goal of regulation should be to establish rates which approximate as closely as possible the rates which would result if there were effective competition in a free market.

We do not believe rate regulation need be unduly burdensome or costly. Our own experience with the application of existing regulations has been something less than satisfactory. For example, we have been involved in a rate proceeding concerning petroleum product shipments on the Williams Pipe Line since 1971. Such a protracted delay is excessive and effectively deprives the shipper of relief.

In an effort to end this excessive delay, the complaining parties in the Williams case, a Federal Energy Regulatory Commission proceeding designated as Docket OR79-1, et al., Williams Pipe Line Company, filed a complaint in the United States District Court for an order requiring the Commission and Commissioners to decide Phase I of the Williams proceeding. That suit, *Farmers Union Central Exchange, et al.* v. *Federal Energy Regulatory Commission, et al.*, Civil Action No. 82-2065 before the United States District Court for the District of Columbia, was filed July 26, 1982. On August 23, 1982, the District Court entered its order giving FERC sixty

days within which to enter its decision in Phase I of the Williams proceeding. It should not be necessary to go to such lengths to obtain action by FERC. If FERC complied with the court's order, it would at least have the opportunity to develop an approach which would require just and reasonable rates. Instead of making any effort to comply with the court's order, the FERC has instead requested a stay of the order pending appeal.

We also believe that proper rate regulation would not require the suspension of every tariff filed. In fairness, however, the present large backlog of FERC tariff cases is more illusory than real. It seems very likely that once fundamental rate regulation principles are established those cases will be disposed of with dispatch.

Just and reasonable rates are rates which are sufficient to (a) provide profits to the equity owners commensurate with profits earned on investments in other enterprises having corresponding risks; and (b) assure confidence in the financial integrity of the enterprise so as to maintain its credit and to attract capital and cover its expenses. Maximum tariffs should be determined by applying an equitable rate of return to a reasonable rate base.

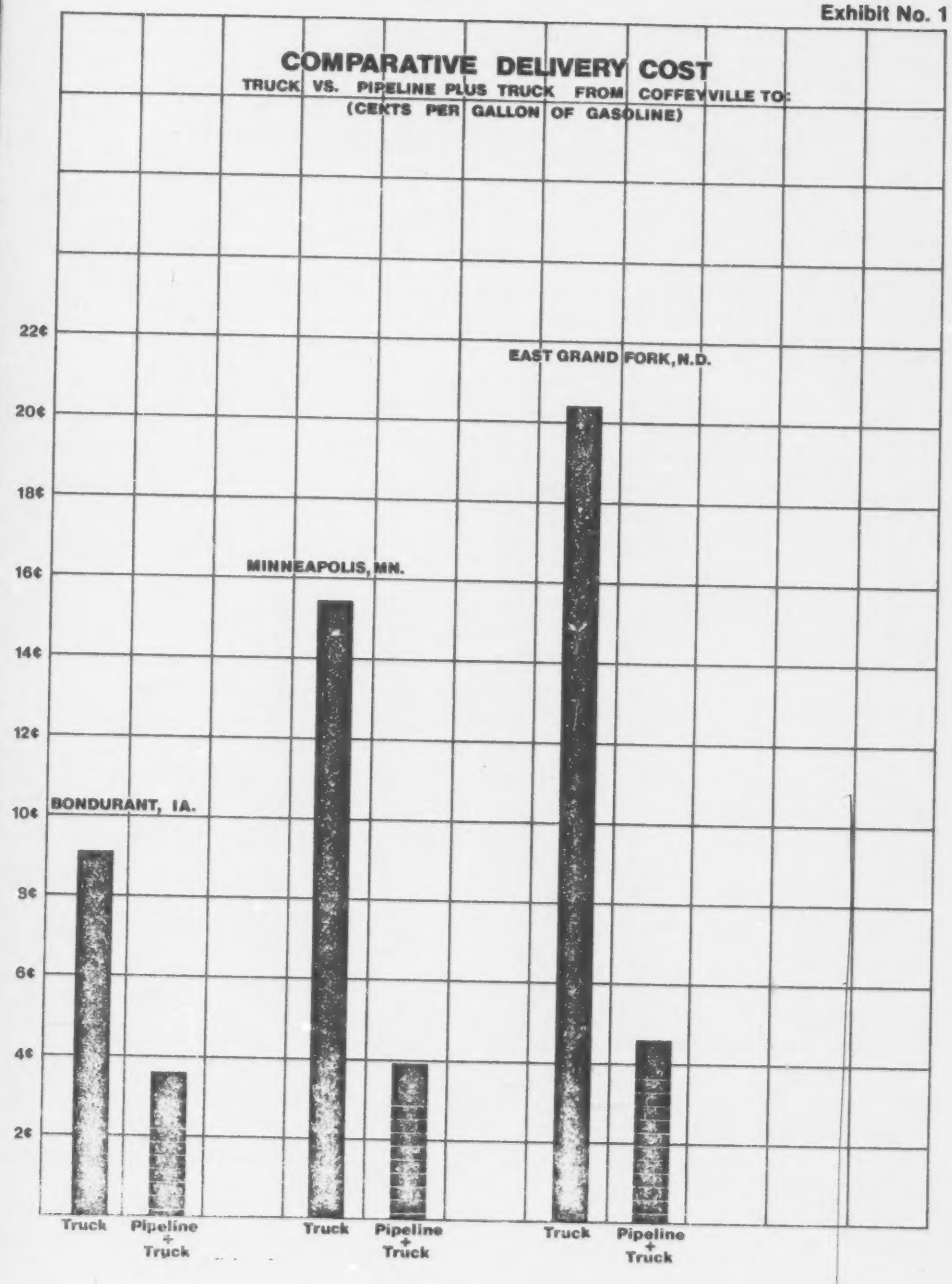
The rate base easiest to determine and administer is one where the tangible property portion is the cost of pipeline property when first devoted to transportation service less depreciation. The rate of return applied to such a rate base would have to be high enough to allow a tariff level sufficient to provide the necessary funds to meet the requirements of (a) and (b) above; the Commission should have the flexibility to establish an allowable rate of return which will meet the needs of each pipeline so that each pipeline would charge tariffs which would be sufficient to provide a reasonable profit on investment in the pipeline property in addition to covering operating and other appropriate expenses. This is not a novel approach but had been used for years by the Federal Power Commission as well as a majority of state regulatory agencies. It would require a minimal amount of regulation and regulatory effort.

It is not necessary that the Commission give extensive attention to each and every pipeline. The Commission should be required to act, and to act timely, where there are shipper complaints. In order to protect the interest of shippers and consumers, the Commission should retain the authority to act on its own initiative. As a practical matter, if the Commission investigated only tariffs for which there were complaints, most pipelines because of the predominance of shipper/owners would have achieved de facto deregulation.

One of the announced purposes of pipeline rate deregulation is to create the incentive to make additional pipeline investments. With respect to petroleum product pipelines, there is no apparent present need for any new parallel pipeline systems. Because of the natural economies of scale of pipelines, it does not make sense to encourage multiple parallel pipelines. Some new product pipelines may be needed if there is a significant shift in the current demand picture. By this I mean more than just an increase in total demand. A significant change in population concentrations might change the demand in certain geographical areas. Another example that could result in a new pipeline would be a change in supply due to refinery closings. New crude oil discoveries might result in a new crude oil pipeline being built. We are not aware of any example of a pipeline not being built because of ICC or FERC rate regulation. At such time as additional pipeline transportation systems are required, we are sure they will be built and that FERC regulation requiring just and reasonable rates would not prohibit the construction of such pipelines.

I appreciate the opportunity you have provided me to share with you some of our concerns and the concerns of the farmers and ranchers which own Farmland Industries. We think other consumers will have the same kinds of concerns that the agricultural producers have. I hope we have been able to shed some new light on this matter of pipeline regulation. Most of all, we hope that you understand why we feel it is imperative that protection be provided to pipeline shippers through effective regulatory controls.

Exhibit No. 1


COMPARATIVE DELIVERY COST
TRUCK VS. PIPELINE PLUS TRUCK FROM COFFEYVILLE TO:
(CENTS PER GALLON OF GASOLINE)
22¢
20¢
18¢
16¢
14¢
12¢
10¢
8¢
6¢
4¢
2¢
EAST GRAND FORK, N.D.
MINNEAPOLIS, MN.
BONDURANT, IA.
Truck
Pipeline + Truck
Truck
Pipeline + Truck
Truck
Pipeline + Truck

Senator STEVENS. Thank you both very much.

Mr. Bailey, you indicated in your statement that your company actually earns less than the returns allowed by regulation because of competitive realities now. Now, if that is the case, how would deregulation help you?

Mr. BAILEY. In the sense of providing an opportunity to do anything to improve our returns, I do not think that it would have any benefit.

Certainly, as a result of the regulatory involvement that we have had before the ICC and now the FERC, we have had substantial legal fees, substantial management time devoted to regulatory proceedings, administrative proceedings. We could recapture that and, since we are competitively priced, presumably that would go to our profitability. But that is small in relation to the overall cost of our operation.

Senator STEVENS. How long has that case been going on now, Mr. Bailey?

Mr. BAILEY. A little over 10 years.

Senator STEVENS. And I assume it has cost both sides a considerable amount of money?

Mr. BAILEY. I know it has cost our side a considerable amount of money. I am not sure about the other side, but I could only presume that it has.

Senator STEVENS. As I understand the administration's position this morning, in areas where there was any type of monopolistic allegation and a finding of that, that it would be retriggered for regulation. Is not one of the allegations in your case that there is a monopoly in that area?

Mr. BAILEY. I do not know that the record in our case is really couched in those terms, because the entire record was built on the presumption of regulation. I think it has only been in these hearings that that suggestion has been made.

Senator STEVENS. I understand that you are currently in the process of regulation, but that presumes a monopolistic character, does it not?

Mr. BAILEY. That is correct.

Senator STEVENS. So if we take off regulation you would be one of those who would be a target for the trigger, would you not?

Mr. BAILEY. Well, from my friend on my left here, just the way he has styled his testimony, he apparently is trying to meet one of the suggested tests of the Justice Department, yes.

Senator STEVENS. Well, Mr. Putman, this has been a long delayed procedure that you have been involved in. Do you see any indication that there would be legislation that your part of the industry would support to reduce the time and the cost of this regulatory process and the litigation that ensues as a result of it?

Mr. PUTMAN. At this point in time it would appear that the current legislation in place is adequate to provide the authorities required for the FERC to go ahead and make the decisions and carry out their duties. We think it is a matter of expediting those activities and coming forth with the decisions that are needed so that the industry can move ahead.

Senator STEVENS. I think one of the concerns that leads us to hold hearings like this and to consider cases like this, legislation

like this, is the very fact of delay. And as I say, I was one of those who was opposed to taking the jurisdiction from the ICC to the Federal Energy Regulatory Commission. We were told at the time that it would accelerate the decisions on cases such as the *Williams* case. My memory is it was in the ICC first, was it not?

Mr. BAILEY. That is correct.

Senator STEVENS. But as a matter of fact, we are 4 years plus into it, and I do not see that they are any further along now than at the time we changed the jurisdiction from the ICC to FERC.

One of the real problems I think the committee faces is, assuming that there is going to be a reservoir of regulation, how do we get that regulation to be responsive to the needs of the industry? Certainly 10 years cannot be responsive to your needs; is it, Mr. Putman?

Mr. PUTMAN. It certainly is not.

Senator STEVENS. Well, I would think that you two gentlemen would agree, if on nothing else, on the fact that being involved in a 10-year proceeding is too much of a strain, on each of your portions of the industry. Would you agree on that?

Mr. BAILEY. I would agree that the proceeding has lasted far too long.

Senator STEVENS. Then my real problem is, how do we find a way to devise legislation that will have a dual effect of eliminating regulations in the areas where it is really not required, and if there is an area that is triggered into a regulatory phase how do we devise a regulatory period that is responsive within a real timeframe?

Mr. BAILEY. My suggestion certainly is one that would contemplate deregulation as set out in S. 1626, without any reregulation provision. It seems to me that the record that has been developed in this proceeding, that the studies of the type of Dr. Mitchell's provide a comprehensive look of the industry as it exists today, and that that study would support the conclusion that there is not the need for reregulation.

Even the administration to my knowledge has never said anything other than there may be a need and they want to reserve the option in the event that that emerges. It seems to me that the record is complete enough to make a judgment on the industry that exists today.

Mr. PUTMAN. I think that our example is a clear case where we really have, for the multi-State areas that we serve, only one pipeline system available to deliver product from our refinery to that area.

This certainly means that as we are running our business we have no economic choice, no alternative to go to for transporting fuels to the consumers in that area. And certainly pipeline transportation of fuels to that area is very essential.

Senator STEVENS. Yes, I understand that. I am constrained to point out to both of you, that in the time you have been involved in this administrative procedure there has been a 70-percent change in the Senate, and we have the problem of having some continuity as far as involvement in this whole process. In the last 6 years, there have been 56 new Senators come in here, an equal change in the House, and we have the whole question of changing attitude

with regard to the existing law, which is obviously reflected by the bill before us.

And I think the dissatisfaction comes primarily from delay, which again, as I say, I think each of you find oppressive, and I think there is the place that we ought to concentrate ourselves as soon as possible and to make whatever regulatory entity is available much more responsive to the needs of people in the industry, whether they agree or not.

I do thank you both, though, for participating, and look forward to working with you again.

Our last panel is Mr. Turpin of Alyeska Pipeline Service Co.; Mr. Ken Fountain, director of the Exxon Pipeline Co.; and Richard Barber, president of Richard J. Barber Associates, who is testifying on behalf of the trans-Alaska pipeline systems carriers.

Good morning, gentlemen. Mr. Turpin, why do you not proceed.

STATEMENTS OF FRANK G. TURPIN, PRESIDENT, ALYESKA PIPELINE SERVICE CO.; KENNETH P. FOUNTAIN, DIRECTOR, EXXON PIPELINE CO.; AND RICHARD J. BARBER, PRESIDENT, RICHARD J. BARBER ASSOCIATES, INC., ON BEHALF OF THE TRANS-ALASKA PIPELINE SYSTEMS CARRIERS

Mr. TURPIN. Thank you, Senator Stevens.

My name is Frank Turpin. I am president of Alyeska Pipeline Service Co., and I have held this position since July 1978. I am very pleased to have an opportunity to discuss the role of Alyeska as it relates to the operation of the trans-Alaska pipeline system, since I understand that this system is an important consideration in the pending oil pipeline deregulation proposal.

At the outset, it is important to understand that the legislative proposal is a matter of policy concern for the eight individual owners of TAPS and is not a concern of the management of Alyeska.

Alyeska was formed in 1969 to serve two principal roles: During the initial construction, which ended in 1977, it acted as contractor for the TAPS owners in the preparation, planning, design and construction of the pipeline. Since the completion, it has performed the day to day operation of the system for each owner.

Initial flow of North Slope oil through TAPS in 1977 was at a nominal rate of 750,000 barrels per day, and it is currently flowing at a rate of slightly more than 1,600,000 barrels per day.

In order to understand what Alyeska is and does, it may be helpful to start out by reviewing what Alyeska is not and does not do. Alyeska is not a common carrier pipeline company. It does not have a tariff. It does not deal with shippers of crude oil, solicit crude oil for shipment, or collect tariff revenues. These functions are performed by each owner acting separately.

Alyeska's sole function is to attend to the operation and maintenance of the system. Each of the eight owners has an undivided interest in TAPS. In that regard, it might be best to think of it not as a single pipeline, but as a bundle of eight separate pipelines. Each of the separate pipeline companies has its own tariff.

Alyeska, as a contractor for each of these pipeline companies, notifies each company in advance of its available pipeline space for a

given period of time. Each of the pipeline companies is individually responsible for soliciting shippers to fill its pipeline space in TAPS. Each company informs Alyeska of the amount of crude oil it intends to ship in its space for that period and of the identity of the shippers and the volume of each shipper that has tendered crude oil to the pipeline.

Alyeska records this information for the purpose of accounting for the receipts at pump station one and deliveries to Valdez. It is important to note that the information provided to us by the carrier, such as Arco Pipe Line Co., would not be available to any of the other carriers except as it relates to the total volume transported during a given period. Therefore, there is no way for one of these pipeline companies to obtain information as to the specific shippers or clients of the other pipeline companies.

[The attachment referred to follows:]

EXCERPT OF AGREEMENT FOR THE OPERATION AND MAINTENANCE OF THE TRANS ALASKA PIPELINE SYSTEM, BY AND AMONG AMERADA HESS PIPELINE CORP., ARCO PIPE LINE CO., BP PIPELINES INC., EXXON PIPELINE CO., AND UNION ALASKA PIPELINE CO., PHILLIPS PETROLEUM CO., SOHIO PIPE LINE CO., AND UNION ALASKA PIPELINE CO.

SECTION 6.—OPERATION

6.1 *Rights of Owners.*—Each Owner, as the holder of an undivided interest in the System, has and retains all the rights of ownership incident to its undivided interest subject only to any applicable laws and regulations, the TAPS Agreement, the Rights-of-Way Agreements and this Operating Agreement. To enable each Owner to exercise its rights, Operator, under the direction and control of the Owners through the Owners Committee, will perform certain duties related solely to the physical operation and maintenance of the System as set out in this Operating Agreement and will act as the Owners common agent to the extent required by the Rights-of-Way Agreements.

6.2 *Individual Common Carrier.*—Each Owner is obligated to conduct the operation of its undivided interest in the System as a common carrier facility and each Owner has agreed that, from and after the Date of Commissioning, its undivided interest in the System will be operated as an individual common carrier facility. In performance of such undertaking, each Owner on its own behalf will in accordance with all applicable laws, regulations and agreements:

(a) separately publish and file tariffs in its own name.

(b) separately solicit and receive tenders of Petroleum from shippers.

(c) separately arrange with its shippers for the transportation of any such tendered Petroleum.

(d) separately collect for its own account and freely dispose of any revenues from its individual and separate operations as a common carrier.

(e) separately arrange for and provide funds required to pay its share of expenses for the operation and maintenance of the System.

(f) separately exercise such other rights and perform such other functions required to operate its undivided interest as an individual common carrier facility.

Neither Operator, nor the Owners Committee, shall have any responsibility for, nor shall they take any action on, matters which relate to common carrier responsibilities as set out in this Section 6.2.

6.3 *Owners Committee—Powers and Functions.*—Each Owner will exercise supervision of the Operator's services through its representative on the Owners Committee. The Owners through the Owners Committee shall:

(a) approve budgets pursuant to Section 11.2 hereof.

(b) approve the acquisition in the name of the individual Owners of Land Rights, materials, supplies and services as required through the budget approval under Section 11.2 hereof.

(c) approve all manuals referred to in this Operating Agreement.

(d) establish standards and procedures for connections to the Pipeline as required by Section 7.8 hereof.

(e) approve settlement of claims, initiation of lawsuits and such other matters as required by Section 9.2 hereof.

(f) approve the disposal of material, equipment and facilities as required by Section 10.2 hereof.

(g) exercise such other authorities and powers as are delegated by the Owners under the terms of this Operating Agreement or as may be required to provide guidelines and policies to permit Operator to perform its services.

6.4 *Operator's Services.*—To enable each Owner to exercise its rights and to effectively discharge its obligations as an individual common carrier, Operator will perform on behalf of each Owner the services related solely to the physical operation and maintenance of the System. As more specifically detailed in this Operating Agreement, Operator shall:

(a) perform such mechanical activities as may be required to transport and otherwise handle Petroleum in each individual Owner's share of System capacity and load on Vessels when and as requested by each Owner consistent with the terms of this Operating Agreement.

(b) submit to Owners recommended budgets, in accordance with Section 11.2 hereof, for their consideration and approval through the Owners Committee.

(c) purchase or cause to be purchased for and in the name of Owners necessary materials, supplies and services and incur such expenses and commitments as required to carry out the operations in accordance with Approved Budgets and within the limitations of this Operating Agreement.

(d) make timely payment of all proper charges, expenses, and liabilities incurred in connection with Approved Budgets and Section 11.3 hereof.

(e) coordinate the acquisition of Land Rights by the Owners as required for the physical operation of the System in accordance with Approved Budgets and Section 6.5 hereof.

(f) act as coordinator of Owners contact with government agencies where required by rules, laws or regulations and/or the Rights-of-Way Agreements relating to the physical operation and maintenance of the System.

(g) dispose of materials, equipment and facilities in accordance with Section 10.2 hereof.

(h) issue only such news items or otherwise engage in public affairs as will be consistent with guidelines issued by the Owners through the Owners Committee relating to the physical operation and maintenance of the facilities within the System.

(i) perform such other activities and take such other action as may be required to carry out the Approved Budgets and other decisions made by the Owners through the Owners Committee, provided such activities or actions relate solely to the physical operation and maintenance of the System.

In performance of its activities pursuant to this Operating Agreement, Operator shall not do any work which would constitute an expansion of the System as that term is used in Article VI of the TAPS Agreement. Operator shall perform all its services under this Operating Agreement in a good and workmanlike manner as a prudent Operator would under the same or similar circumstances. Operator shall conduct all operations and maintenance of the System in accordance with generally accepted practices in the pipeline industry to the end that the System is operated within its design limitations for safe and efficient operations.

6.5 *Acquisition of Land Rights.*—All Land Rights shall be acquired by the Owners pursuant to an Approved Budget. It is contemplated, however, that, for convenience, title to some of the Land Rights, such as easements, leases, licenses and permits, may be acquired by and in the name of a Trustee for all of the Owners, in which event the Trustee shall thereafter, as each Owner may individually direct, promptly execute and deliver to all Owners or to one of them as Trustee for all Owners such instruments of transfer, assignment and conveyance as may be appropriate to evidence properly the undivided interest ownership of the particular Owner or Owners. Condemnation may be used by any Owner or Owners to acquire Land Rights whenever the terms and conditions asked for such Land Rights are unreasonable. Each Owner hereby consents to join as a party plaintiff in any condemnation suit filed on conditions hereinafter defined for the purpose of acquiring Land Rights needed for the operation and maintenance of the System and authorizes any attorneys retained in such condemnation suit to join it as a party plaintiff in such suit and to represent it for all purposes in such condemnation proceeding. Each Owner further agrees that it will become qualified to the extent necessary to transact business in the State of Alaska if it is necessary or desirable to do so in order to avoid delay in condemning any such Land Rights. Each Owner shall qualify as promptly as practicable after it is determined that qualification is necessary. All such Land Rights shall be acquired, whenever possible, in assignable form. The cost of all such Land Rights shall be charged to the account of each Owner in accordance with Sections 10 and 11 hereof.

6.6 *Personnel and Other Services.*—Operator in performing its duties under this Operating Agreement shall engage the services of independent contractors to perform such parts of the operation and maintenance of the System which cannot be performed by Operator's employees or which can more economically and just as efficiently be performed by independent contractors as with Operator's own employees. Operator shall employ only such personnel as are required to perform its duties under this Operating Agreement and are within staffing limits established by the Owners through the Owners Committee.

Mr. TURPIN. Alyeska maintains records by which it can account for the receipt and delivery of crude oil and actually prepares tickets which are provided to each of the carriers, so that each may collect tariff revenues from its shippers. Alyeska does not collect the tariff revenues for the carriers and in fact has no dealings whatsoever with shippers other than to coordinate with the North Slope producers responsible for operating the fields to assure that operations of the system and the field are harmonious.

Mr. Chairman, I greatly appreciate the opportunity to appear before the committee and clarify some of the issues related to the operation of the trans-Alaska pipeline system, and I would be pleased to respond to any questions which you might have.

Senator STEVENS. Thank you, Frank.

Mr. Fountain?

Mr. FOUNTAIN. Thank you, Mr. Chairman.

I have a formal statement here. I would like it to appear in the record in its entirety, and I will summarize a few points from it.

I am a director of Exxon Pipeline Co., and as you are aware, Exxon operates an extensive pipeline system in the lower 48 and is one of the eight owners of the trans-Alaska pipeline system. We operate our interest in the trans-Alaska pipeline system as a separate common carrier totally distinct from the other seven owners.

We are also members of the AOPL and we endorse the statement and position taken by Mr. Dean Taylor and those who testified with him. I think I can state relatively quickly what we have all agreed on today—we have heard it all day long—that there is no public interest in regulation or continued regulation of the pipeline industry if that industry doesn't need to be regulated to protect the public interest or if you don't need a substitute for the free marketplace. I think there is where we begin to digress as to where does the public interest come in, what is competition.

The administration has taken a position that they favor deregulation, that they want some kind of a reregulation under market power, market dominance. Although they have been saying that for 4 months, we understand today that it is going to be sometime next spring before we know what that is going to look like in particular, and I guess it is premature to comment on it. But the final position, that is, that TAPS should be excluded from that deregulation, is something that we want to comment on today.

This position, we think, is simply unfair. It is based upon a misconception. It has no consumer or public interest basis. It defeats the purpose of oil pipeline deregulation and sends a message of uncertainty to potential investors in major oil pipeline projects that by its very nature, the idea of reregulating or maintaining regulations over frontier pipelines, it has to follow that axiomatically every new pipeline that is going to be built in a frontier area must remain subject to regulation.

We think that is not in the public interest and it is not in the interest of the development of this Nation's energy, and it particularly is not in the interest of Alaska. According to the National Petroleum Council, and I think you mentioned it earlier, Senator, half of the oil that is going to be found in this country is going to be found in Alaska, and it is not all going to come out of Alaska on the trans-Alaska pipeline system.

There are going to have to be other systems built. There are going to have to be incentives for those pipelines to be built. As you mentioned with another witness today, we have already had an example of the uncertainty that tax policy can make with respect to investor incentives to invest in areas where there is risk like frontier areas. If the Petroleum Council is correct, in the next 40 or 50 years the petroleum industry in all of its phases is going to be looking at investing $300 billion in the State of Alaska, and that doesn't include lease sales or unsuccessful exploration costs.

If growth potential such as this is to be realized beyond the current Prudhoe Bay activity, a business climate which attracts the proper level of investment is needed. Government regulation will play a major role in creating that environment.

There are a lot of ifs in the future of oil production and transportation in Alaska, in the U.S. Arctic areas. However, one certainty is that if the ifs grow larger without a healthy business and investment climate, if the oil pipeline industry is to attract the necessary capital to compete in these frontier areas, economic regulation should be eliminated.

Exxon Pipeline believes that the exclusion of the eight TAPS carriers from deregulation will have an adverse impact on new frontier pipelines and expansion of existing lines and, therefore, an adverse impact on consumers. Investors operate on perception of risks. One of the risks is regulation.

TAPS is the best example of a frontier pipeline which is now besieged by an oppressive regulatory climate. For this reason, in frontier areas TAPS is the standard by which investors must judge investment risks. In addition to facing extraordinarily high business risks, TAPS has been the most overregulated project in history.

Investors have not forgotten the trials and tribulations that the owners of TAPS had to overcome to make the project a reality. Moreover, as you mentioned earlier, we have not even had a final decision in the first phase, but the administrative law judge in that first phase in making his decision likened the investment in TAPS to an investment in a Government security.

The message to potential investors in other major frontier pipeline projects is clear: Even if a project is a technical and operational success, regulation can turn it into a bad investment.

Years ago I sat in another hearing room in this same building when we were trying to get a permit to get a right-of-way across Alaska to build the TAPS pipeline. Congress is now faced with the prospect that the economic regulation of TAPS will destroy the economics of that investment and thereby create an even greater uncertainty for future projects in the Alaskan frontier.

Just as there were proponents that TAPS should not be built, there are now proponents that TAPS should be singled out from the pipeline industry for more restrictive treatment.

TAPS is the largest private project in the history of the world. Its technological success, environmental accomplishments and contribution to the balance of payments and the energy self-sufficiency of this Nation have proved Congress right in enacting the TAPS Act, in which you played an important part. Likewise, the deregulation of TAPS and the projects that such deregulation will foster will again prove Congress right when it passes S. 1626 with the amendments.

The continued high level of long-term interest rates despite lower inflation demonstrates the difficulty in changing investors' perceptions. It cannot be done overnight. Oil pipeline investors need a signal from Congress now. Excluding TAPS from deregulation would be the wrong signal.

We have heard talk about a lot of theory about pipelines today. One theory is how a monopolist operates. A monopolist restricts his market and he raises his prices. What is the history of TAPS? As a matter of fact, it was designed for 600,000 barrels a day. It was expanded to 1,200,000 before it was even completed. It continues to be expanded.

And what has been its price history? Two of the carriers have recently reduced their rates: Exxon Pipeline reduced theirs to $5.30; British Petroleum reduced theirs to $5.40. The wellhead price from the inception of production has gone up, not down. Now, we have had a lot of theory about how pipelines operate, and I think the problem with the theory is they are looking at a narrow day, one day in the history of a pipeline system.

We have been in business building and operating pipelines for approaching 100 years. You don't stay in business that long looking at how much you can gouge somebody today. You operate your business so that you can stay in business. We want exploration and production in Alaska. When I say "we," I am talking about Exxon Pipeline Co., because we want to haul their oil.

Mr. Barber is going to speak further on the economic atmosphere in which TAPS operates, and I thank you for taking your time to listen to me and I will be happy to respond to any questions you might have.

Senator STEVENS. Thank you very much.

[The statement follows:]

STATEMENT OF KENNETH P. FOUNTAIN, OFFICER AND DIRECTOR, EXXON PIPELINE CO.

Mr. Chairman and members of the committee, my name is Kenneth P. Fountain. I am an Officer and Director of Exxon Pipeline Company. Exxon Pipeline Company, in addition to operating extensive oil pipelines throughout the lower 48 states including offshore areas, is one of the eight Owners of the Trans Alaska Pipeline System (TAPS). Exxon Pipeline operates its interest in TAPS as a separate common carrier totally distinct from the other seven Owners. The other Owners operating as separate common carriers in TAPS are Amerada Hess Pipeline Corporation, ARCO Pipe Line Company, BP Pipelines Inc., Mobil Alaska Pipeline Company, Phillips Alaska Pipeline Corporation, Sohio Pipe Line Company, and Union Alaska Pipeline Company.

Exxon Pipeline Company is also a member of the Association of Oil Pipe Lines (AOPL) and strongly supports the statement of Mr. Dean B. Taylor on behalf of the AOPL and the supporting statements of Professor Edward J. Mitchell and Mr. Richard J. Barber. These statements clearly show that there is no public interest to be served by continued regulation of the pipeline industry. Governmental regulation should only be imposed on an industry to protect the public interest and/or act as as substitute for the free market place where none exists. I think the record is clear

that neither criteria is applicable to this industry and therefore the need for regulation does not exist. Exxon Pipeline urges this Committee to favorably consider S. 1626 as amended by Printed Amendment No. 1239.

In addition to our support of the AOPL, Exxon Pipeline is here today to address one aspect of the position of the Administration on oil pipeline deregulation. As we understand it from prior hearings before the Congress, the position of the Administration is a three-part proposal. First, the Administration proposes the total deregulation of oil pipelines as opposed to the limited economic deregulation supported by AOPL; second, the Administration proposes that oil pipelines be subject to reregulation based on a "market power" or "market dominance" concept; and third, the Administration proposes the exclusion of TAPS from deregulation even with the reregulation concept. Although it has been over four months since the Administration made its first and second proposals, it has not made public any further delineation of these proposals. Without the specific proposals, it is premature to comment. We would like, however, to speak to the third proposal, i.e., exclusion of TAPS from any deregulation. There the Administration, with no meaningful study or other supportive data, simply proposes a congressional fiat that the eight TAPS carriers should not be accorded the same treatment as other oil pipeline carriers. This, in our opinion, is simply unfair; is based on misconception; has no consumer or public interest basis; defeats the purpose of oil pipeline deregulation; and sends a message of uncertainty to potential investors in major oil pipeline projects.

We feel very strongly that a principal objective of the proposed legislation is to encourage expansion of the U.S. oil pipeline transportation system, especially in the frontier areas which will become increasingly important to future U.S. energy supply. These frontier areas include not only onshore areas such as the Overthrust Belt and the Tuscaloosa Trend, but also offshore and Alaska areas. To take Alaska as an example, the National Petroleum Council (NPC) has indicated that the undiscovered oil and gas resource base in the Arctic may encompass as much as 40 percent of the total undiscovered recoverable oil and gas resources remaining within the jurisdiction of the U.S. For oil alone, the NPC estimates that as much as 50 percent may occur in the U.S. Arctic. If the National Petroleum Council study is right about the extent of Alaska's oil and gas resources, and if these resources are indeed discovered, then over the next 40 to 50 years petroleum companies could spend almost $300 billion in 1981 dollars on development, transportation, and operating expenses—and this doesn't even count lease bonuses and unsuccessful exploration costs. If growth potential such as this is to be realized beyond the current Prudhoe Bay activity, a business climate which attracts the proper level of investment is needed. Government regulation will play a major role in creating that environment.

Even with current economic conditions, imports are required to meet one-third of U.S. petroleum needs. Projections are that this import share of total U.S. needs will increase to more than half by 1990. In addition, production from existing conventional domestic oil reserves will decline by about 60 percent over the next 20 years. To displace imports and replace domestic production, a very substantial effort will be required in frontier areas. Transportation will therefore play a major role in getting the needed oil to market. In frontier areas, transportation by pipeline can be the most economical and environmentally acceptable means to transport crude oil to market. The oil pipeline industry needs to be a major factor. But to meet the challenges, vast amounts of capital and new technology will be required.

There are a lot of "ifs" in the future of oil production and transportation in Alaska and U.S. Arctic areas. However, one certainly is that the "ifs" grow larger without a healthy business and investment climate. If the oil pipeline industry is to attract the necessary capital to compete in these frontier areas, economic regulation should be eliminated. Exxon Pipeline believes that the exclusion of the eight TAPS carriers from deregulation will have an adverse impact on new frontier pipelines and expansions of existing lines and, therefore, an adverse impact on consumers.

Investors operate on perception of risks. One of the risks is regulation. TAPS is an important example of a frontier pipeline which is besieged by an oppressive regulatory climate. For this reason, in frontier areas, TAPS is the standard by which investors must judge investment risks. In addition to facing extraordinarily high business risks, TAPS has been the most over-regulated project in history. Investors have not forgotten the trials and tribulations that the Owners of TAPS had to overcome to make the project a reality. Moreover, a FERC Administrative Law Judge sent an even more economically discouraging message in his initial decision in Phase I of the TAPS rate proceeding. Likening an investment in TAPS with an investment in long-term government securities, he structured a regulatory methodology which simply makes an investment in TAPS uneconomic. The message to potential inves-

tors in other major frontier pipeline projects is clear. Even if a project is a technical and operational success, regulation can turn it into a bad investment.

Years ago Congress faced up to the prospect that TAPS would not be built by enacting the Trans Alaska Pipeline Authorization Act. Congress is now faced with the prospect that the economic regulation of TAPS will destroy the economics of that investment and thereby create an even greater uncertainty for future projects in the Alaska frontier. Just as there were proponents that TAPS should not be built there are now proponents that TAPS should be singled out from the pipeline industry for more restrictive treatment. TAPS is the largest private project in the world. Its technological success, environmental accomplishments, and contribution to the balance of payments and the energy self-sufficiency of this nation have proved Congress right in enacting the TAPS Act. Likewise, the deregulation of TAPS and the projects that such deregulation will foster will again prove Congress right when it enacts S. 1626 as amended by Printed Amendment No. 1239. The continued high level of long-term interest rates, despite lower inflation, demonstrates the difficulty in changing investors' perception. It cannot be done overnight. Oil pipeline investors need a signal from Congress now. Excluding TAPS from deregulation would be the wrong signal.

We believe that the Administration's position on TAPS is based on a total misconception of how TAPS is organized and operated. The most common misconception about TAPS is that it is a single entity operating as a single pipeline carrier. It is not. TAPS is eight pipeline carriers operating in a single pipeline system physically operated and maintained by Alyeska Pipeline Service Company. Each pipeline carrier owns a discrete amount of the TAPS mechanical capacity and operates its own pipeline business; posting its own tariffs, soliciting tenders, billing and collecting from its shippers completely independently of the other TAPS carriers. These facts are simply ignored by those who would label TAPS a "natural monopoly." The advantage of physically combining capacities into a single pipeline system to provide transportation at a much lower cost is not unique to TAPS, but is also used in a number of lower 48 pipelines. Mr. Frank Turpin, President of Alyeska, is here today and will describe in more detail the role of Alyeska.

As has been noted by Mr. Taylor, speaking on behalf of AOPL, Mr. Richard J. Barber, a recognized expert in transportation matters is also providing testimony to the Committee regarding his study, "The Transportation of Alaskan North Slope Oil by Pipeline: An Assessment of the Competitive Issues Relevant to Rate Regulation". Mr. Barber should be in a position to address issues related to the competitive environment within which TAPS operates.

Thank you for this opportunity to appear before you today on a matter which is so critical to the nation's economy and security. I, of course, will be glad to answer any questions you have on my statement. Exxon Pipeline urges early and favorable consideration of S. 1626 and Printed Amendment No. 1239 by the Committee and is prepared to work with the Committee as appropriate.

Senator STEVENS. Mr. Barber, unfortunately I have just been told I am supposed to be on the floor in about 5 minutes, so I am going to have to ask you if you can summarize your testimony.

Mr. BARBER. I will seek to do so, Senator. The statement is going into the record, as you have indicated, along with a copy of my report,[1] so I will try to be very brief.

I think that, as several of the witnesses here have suggested this morning, the real concern of those who would like to single out TAPS and maintain it as an intensely regulated enterprise is rooted in the notion that TAPS for some reason has an assured guaranteed source of crude oil volume from Alaska for its entire service life, and that therefore it is in the position of being able, absent regulation, to charge what it wishes.

This is simply false. The reality is that this line, capable of carrying more than 1.5 million barrels of oil a day, has a service life that extends, as you well know, Senator, well into the next century. That is a period of at least 30 years from now. However, as verified by various Government studies, production from the Prud-

[1] The report is in the committee files.

hoe Bay unit, which is the bulk of the oil that is moving over TAPS, will begin to recede, starting later in the 1980's.

As we get into the 1990's, as we turn to the year 2000, there is not going to be anything like enough oil from the Prudhoe Bay unit or even from Kuparuk to keep this line filled, and to provide oil for the eight carriers to generate revenue from which to amortize their investment over the life of this $9 billion capital commitment for them as a group.

The only way that they can therefore generate the traffic off in the 1990's and beyond the year 2000 is to price and set rates now in the shortrun while the line may be full in order to encourage the exploration in this very difficult environment of Alaska that will hopefully produce and generate the substantial volume of oil that will be their source of traffic off in the 1990's and in the 21st century.

They can only do that if they price and set rates reasonably, that is, if they price now with a view to encouraging, not discouraging exploration by all comers, whether they are affiliates or unaffiliated or whether they are already active in Alaska, or whether they might only as oil companies become active, or whether they are big or small concerns.

This is, as I see it, along with many other factors that I note in my report, the nub of the matter. In my judgment, regulation is not only unnecessary to keep rates reasonable on the part of these eight carriers, it is not only unnecessary in terms of protecting the consumer interest, which is amply protected in downstream markets by various competitive forces, but if it were continued in the case, certainly, of TAPS, it would be a detriment from the broader national and, I believe, from Alaska's own long-term interest; that regulation if perpetuated, if singled out here in the case of TAPS would send a signal to investors, to explorers, to prospective producers that frontier area investment for pipelines and related facilities is likely to lead not to some freedom of pricing, freedom from regulation, but rather to an assurance of ongoing perhaps perpetual regulation in a way that leaves prospective investors uncertain as to what will happen.

And this may very well choke off, or discourage, or delay, or reduce the amount of investment in pipelines in frontier areas, including those in Alaska and hence work contrary to the larger interests of the United States and of Alaska itself.

For all these reasons, Mr. Chairman, I am of the view that continued economic regulation and rate regulation of TAPS is not warranted and that it, too, along with other lines, should be deregulated with respect to at least rate regulation.

Thank you very much.

[The statement follows:]

STATEMENT OF RICHARD J. BARBER

Mr. Chairman and members of the committee, my name is Richard J. Barber. I am President of Richard J. Barber Associates, Inc., a Washington-based firm that provides economic consultation to business and government.

The specific subject of my testimony is the role and extent of competition and market factors as they relate to transportation of oil by the eight carriers who operate via the Trans-Alaska Pipeline System (TAPS). At the request of these carriers my firm has studied the pertinent competitive situation and prepared a report,

copies of which have previously been made available to the Committee. I would ask that a copy of our 35-page report be included in the hearing record to accompany my testimony.

In summarizing our findings, let me initially say that I agree with the views of other witnesses who appear today and who have concluded that U.S. oil pipelines are subject to widespread competition and that their continued economic regulation is neither necesary nor desirable. Our study shows that what is true generally of competition in the U.S. as it relates to the oil pipelines is also true of the Trans-Alaska Pipeline System (TAPS). Completed in 1977, at a cost of $9 billion, for the purpose of transporting oil from the Alaska North Slope (ANS) to a terminal at Valdez, TAPS is a unified physical entity but involves the operations of eight separate and independent carriers. These carriers establish their own rates (which differ from one another) and transport oil for the various ANS shippers, some of whom are unaffiliated with the pipeline owners. Because the carriers' rates differ, shippers routinely seek out those with the lowest available charges, a fact that means that the carriers transport substantial volumes of oil of unaffiliated users. (So far this year two of the TAPS carriers reduced their rates by about $1 per barrel.) Accordingly, in this market setting the short-run supply and demand dynamics are characteristic of those to be found in a workable competitive environment.

Since the ANS crude oil transported by the eight TAPS carriers competes in U.S. end-use markets with an abundance of oil from other domestic and foreign sources (moved by diverse pipelines and transportation modes), its delivered price—inclusive of the cost of transportation via TAPS—is constrained by market forces. This is true of Alaska North Slope oil delivered to West Coast refineries (where it competes with oil from California and from foreign countries) and to Gulf Coast refineries (where it competes with oil from Texas, Louisiana, and various foreign countries, including Mexico—which, in light of its recent financial difficulties, has substantially expanded its oil shipments to the U.S.). The delivered price of oil from these alternative sources sets the delivered price to which ANS oil, moved over TAPS, must conform. Thus rates charged by the eight TAPS carriers have no effect on the price of oil paid by U.S. consumers.

Long-run considerations also shape the competitive setting. The TAPS pipeline, built to serve the Prunhoe Bay Unit, has an anticipated service life that will extend well into the next century. While the investors plan to amortize its cost over a comparable period, they can do so only if they have an adequate supply of oil to transport. However, output from the Prunhoe Bay Unit itself is expected to begin to decline markedly in the late 1980's, reaching an estimated volume of only 300,000 barrels per day by the year 2000. This figure is equal to only a fifth of the current volume transported by the TAPS carriers. Since December 1981, oil has flowed from the Kuparuk Field adjacent to the Prudhoe Bay Unit, but volumes moving from it over TAPS will only partially offset the decline in Prudhoe Bay Unit production. Further, decisions by ANS producers as to whether to begin development of offshore sites in the Beaufort Sea are still pending. It is thus in the interest of the TAPS carriers, aware of the many years required to develop new oil reserves, to maintain rates in the short-run that will encourage exploration that offers the potential of generating traffic in the 1990's and beyond. These vital long-term considerations also help keep the rates charged today by the TAPS carriers at reasonable levels.

The competitive and related factors which I have summarized (and which are dealt with at greater length in the accompanying report) obviate the need for continuing regulation of rates charged by the TAPS carriers. With decontrol the TAPS carriers will remain constrained in the rates they charge by competition from other oil in destination markets, by their long-term need to encourage the development of oil they can transport, and by potential competition from Alaskan on-shore or offshore oil that could be shipped by new pipelines or by marine transportation. (The U.S. Geological Survey recently concluded that tanker transport in the Arctic has been "found to be technically and economically attractive" while the National Petroleum Council, in its major December 1981 study of U.S. Arctic oil and gas, determined prospective costs for "the wide range of transportation choices available.") In this economic context it is the marketplace, not regulation, that protects consumers and producers from unreasonable pricing or related practices of the TAPS carriers.

This leads to the conclusion that continued regulation of the TAPS carriers' rates is economically unwarranted and without public interest justification, just as is true of oil pipelines in the Lower 48 states. More than that, however, decontrol of oil pipeline rates would remove what has proven to be an administratively burdensome and costly form of regulation that has created unnecesary risks for future pipeline investments.

If TAPS rates were to be singled out and subjected to continued regulation, while existing pipelines in the Lower 48 states were freed from regulatory encumbrances, an economically damaging signal would be sent to potential developers of oil resources in frontier areas of the ANS and elsewhere. With the prospect that pipelines in such areas would remain regulated, the effect would be to bias seriously investors' evaluations of relative risks versus rewards of developing resources in various geographic locations. Similarly, postponing deregulation of TAPS until the pipeline experiences serious shortfalls of demand, would be a poorly conceived stragtegy. The proper policy would permit market forces to operate now, so that the TAPS carriers, through their pricing, can foster immediate decisions to develop ANS petroleum resources. Development initiated currently will come to fruition in future years when Prudhoe Bay Unit production has dwindled.

Finally, I would caution against establishing a new and complicated oil pipeline rate regulatory regime—in the guise of deregulation—based on case-by-case evaluations of market power. Such an approach was suggested by the Justice Department in Senate testimony of Assistant Attorney General Baxter on May 21 of this year. While the Justice Department proposal has not been set forth in detail, I fear that, given the inescapably complex economic issues, it would routinely require vast amounts of facts and interpretations that are not susceptible to simple analysis based on readily available statistical data. The resulting proceedings (for pipelines in the Lower 48 states as well as TAPS) must be expected to be elaborate, complex, and contentious—not "efficient" or "reasonably certain" of outcome, as Mr. Baxter opined in his May 21 testimony. Indeed, this new facet of regulation may well prove perversely to be even more burdensome than that which heretofore has existed. In this respect the outcome would parallel the adverse experience with rail regulation under the market dominance standard as administered by the I.C.C., in which parties have debated issues of "market power" in protracted proceedings that have surged back and forth for years through agency channels and the courts.

By eliminating oil pipeline rate regulation, and relying instead on competitive market forces, productive pipeline investment, vitally important to the development and efficient use of the nation's oil reserves, would be encouraged.

This concludes my prepared statement. I will be pleased to respond to your questions.

Senator STEVENS. There is no question, gentlemen, that there are two sides of the issue, and you have presented your side very well. I would only ask one question. If we do have deregulation and it is eight pipelines, what is going to happen if the administrations' view prevails and one of those pipelines could suddenly be regulated?

Mr. FOUNTAIN. Senator, with the definition that the administration has given us thus far of their proposed reregulation, it is diffcult to even think how that could come to pass.

Senator STEVENS. You don't think one of you could be accused of being a monopoly by operating gas stations somewhere?

Mr. FOUNTAIN. I am sure we can be accused. That is one reason why I am anxious personally to see what their proposal is, because I can't conceive of how it could work. I presume it will be, like Mr. Baxter advised us earlier, that in some markets they might elect just to reregulate the big pipeline and that that will make the other pipelines fall into line. I don't know how that is going to work, either.

Senator STEVENS. Well, in the eight there are two big ones, aren't there?

Mr. FOUNTAIN. Well, it depends upon your perspective.

Senator STEVENS. Compared to pipelines elsewhere in terms of capacity and throughput. There are two big ones, aren't there?

Mr. FOUNTAIN. Well, there are four, really. British Petroleum has about a little over 16 percent, Sohio has about a third, 33⅓ percent, and ARCO and Exxon each have around 20 percent. Those are the four big pipelines. Actually, as far as competition is con-

cerned, it is pretty hard to conceive of a point-to-point system in the whole United States that has four pipelines laying in the same ditch in direct competition with one another.

Senator STEVENS. That is true, but as I understand the administration's point of view, it could be in terms of the whole system rather than a particular segment of the transportation for the crude oil. Maybe I misunderstood them.

Mr. FOUNTAIN. I don't know if I understood you.

Senator STEVENS. What I am saying is I am not sure they are looking just at the TAPS segment of the transportation system for Alaskan oil; that they would look at the whole system to see whether it was monopolistic.

Mr. FOUNTAIN. Are you talking about as to the tanker leg of it and what have you?

Senator STEVENS. The whole connection. Now, maybe I read too much into the statement that they made, but I would find it very interesting that we might end up with a situation where we have eight pipelines and part of them subject to regulation, part of them not but all of the oil going through the same physical pipeline.

Mr. BARBER. I think, Senator, you are putting your finger on precisely the sort of extreme ambiguity that still lurks months after this Justice Department idea, administration idea was first run by the Congress, and that continues now even 4 months later. We have really not progressed very far from May.

There are serious questions. It is highly ambiguous. And I should hope here that the administration would, not next spring but sometime much sooner than that, be able to provide you and us, all of those who are concerned with it, some more specific idea of what it has in mind. What it has in mind I think raises exactly the sort of serious problems that you indicate.

Senator STEVENS. Well, you are right, and I think that this morning I indicated before the hearing started that I hope perhaps in the postelection session we might be able to mark up this bill. I think it is apparent that that is not possible with the timeframe that the administration has outlined. I hope that the rest of you will understand that.

I am certain that it will not be a proper use of our time in a 4-week session to mark up this bill if it is going to be opposed by the administration in the postelection session. But on the other hand, I intend to confer with the chairman and ask him to agree that we will set early follow-on hearings, I would say sometime at the end of February or no later than March, to pursue this issue again. I think Senator Nickles has done a tremendous amount of work on it and deserves a hearing at which the administration will be asked to present their point of view and to let us see the details of their proposal.

It is not possible, in my opinion, for this bill to move until we see that, but I do think that we have every reason in the world to set some reasonable time limit on the time for the submission of the administration's position. I am hopeful that the chairman will agree with me that that should be sometime no later than, I would say, March 15, and that hopefully as early as February we might resume consideration of Senator Nickles' bill.

So I appreciate all of your attention today and the statements you have presented, and I assure you that the staff and the members will be continuing a review of the issue and we would welcome your comments as we proceed. But my judgment now is that unless we can get the administration's point of view by early December, it would not be possible to move a bill through the Congress and therefore not be the kind of issue that we can put the time in the postelection session on. I hope you understand that.

Thank you all very much.

[Whereupon, at 12:40 p.m., the hearing was concluded.]

ADDITIONAL ARTICLES, LETTERS, AND STATEMENTS

STATEMENT OF ROBERT E. THOMAS, CHAIRMAN OF THE BOARD OF DIRECTORS, MAPCO INC.

Mr. Chairman, my name is Robert E. Thomas, Chairman of the Board, Chairman of the Executive Committee and Policy Committee of MAPCO Inc. I am pleased to submit to this Committee testimony in favor of the proposed Pipeline Regulatory Reform Legislation. I would like publicly to express my appreciation to the sponsors and cosponsors of S. 1626 for their initiative in attempting to achieve long overdue regulatory reform for the petroleum pipeline industry.

MAPCO is not an integrated energy company, but it was born in 1960, when the Mid-America Pipeline System was constructed and placed into operation. It was the first long distance common carrier pipeline devoted exclusively to transporting natural gas liquids. We were able to secure financing for the pipeline because we could offer shippers ease of entrance, high deliverability in the market place, short transit times, and most importantly, a scale of rates which would deliver product into a market area at costs below competitive transportation.

As the operator of the nation's largest gas liquids common carrier pipeline, we at MAPCO intend to remain in the pipeline business and to continue to help this dynamic industry expand to meet more fully our nation's energy needs.

For this reason, I urge you to report, pass and enact the Pipeline Regulatory Reform Legislation that is the subject of this hearing. I have testified on this topic on three separate occasions before the Federal Energy Regulatory Commission and, last May, I appeared before the Senate Committee on Energy and Natural Resources to urge passage of S. 1626. On those occasions, I spoke not as a historian, a lawyer, or a political philosopher, but as a businessman. It is my hope today to provide this Committee with the perspective of a businessman who has been engaged, for over 21 years, in the product pipeline business.

At the time MAPCO was started, very few believed that this pipeline could be built and operated by a nonshipper-owner. with funds generated from the sale of stock to the general public and the sale of debentures to a major insurance company. The pipeline was built with no throughput guarantees from shippers and with no assurances to MAPCO's founders that any particular return on investment would be realized. In spite of the claims by current-day critics that the pipeline business is not risky, this was an extremely risky venture.

As a businessman, I decided to take this risk and become part of the petroleum pipeline industry, despite the fact that the industry was federally regulated and despite the fact that I shared the businessman's natural abhorrence of unnecessary and burdensome regulation. The regulatory environment that I faced back in 1959 and 1960, however, was dramatically different from that with which we in the industry must contend today. When I entered the industry, the ICC had been regulating oil pipelines for decades. Throughout this regulatory period, the ICC used a guideline approach to earnings on a valuation based methodology which allowed for the effects of inflation in prescribing allowable rates of return. The ICC's regulatory approach recognized the competitive nature of the industry and permitted oil and petroleum pipelines the opportunity to earn adequate returns on their investments.

What did this regulatory environment means to a businessman facing the risks associated with obtaining financing for a major pipeline system?

It meant, generally that the market place rather than a government bureaucracy set transportation rates; That there was freedom of entry to the industry for new ventures such as ours; That existing pipelines could attract capital by earning adequate rates of return; and That a regulated pipeline business could recover its increased operating costs on a rapid basis without excess regulatory lag.

Moreover, the oil and product pipeline industry responded to the ICC's regulatory approach in a self-policing and responsible manner. There was a virtual absence in a self-policing and responsible manner. There was a virtual absence of shipper's complaints. For thirty years, tariff cases were practically nonexistent. Pipeline rates were, and are, by far the lowest of any form of transportation of petroleum, and

have lagged behind inflationary increases in price levels. Most importantly, during these years of limited government intervention by the ICC, the oil and product pipeline industry provided this country with, what is now unquestionably, the world's most efficient energy transportation system.

In this testimony, I would like to raise two points. First, I would like to warn this Committee of a threat to the continued viability of our industry. Second, I would like to advise the Committee of an opportunity to address this threat and preserve our industry's most important characteristics—open and free competition among its current participants, and ease of access for potential participants.

The threat to the viability of the industry to which I alluded has been brought about by the new era of different, more restrictive and burdensome regulation that the industry has endured. The opportunity to which I previously referred, is to stem this threat and to ensure the expansion and viability of the petroleum pipleline industry by enacting the legislation before you.

Let me first address the threat. As you know, in 1977, with the creation of the Department of Energy, common carrier jurisdiction over oil and product pipelines was transferred from the ICC to FERC. We in the industry were concerned that the FERC, a reincarnation of the oil Federal Power Commission, was familiar only with the regulation of public utility-type industries, and would try to impose inappropriate concepts on oil pipeline common carriers.

Unfortunately, I must report that these apprehensions, expressed by the industry, have been realized beyond our worst fears. Despite the fact that Congress directed that FERC continue to apply ICC rules and practices until changed in accordance with law, an attempt has been made to impose public utility regulatory precepts on oil pipeline on an ad hoc basis.

With no wish to be repetitive, I do want to stress the difference between the petroleum pipeline industry and the natural gas pipeline industry. In the latter, certificates of public convenience and necessity provide natural gas pipelines with a protected market amd a more assured rate of return.

In our industry, there is simply no such protection afforded the petroleum pipeline transportation business. There are no franchises or legal monopolies granted by governmental authorities at either end of the pipeline. There is also intense competition in the industry, brought about the existence of other transportation modes and from other sources of energy.

If Committee Members have not done so, I urge them to read the study conducted by Dr. Edward Mitchell, which has been presented to this Committee and the Committee on Energy and Natural Resources. That comprehensive study illustrates the depth and breadth of competition within the industry. I would also like to point out that the Administration witnesses, at both House and Senate hearings, felt that competition was so prevalent in the lower 48 states that total deregulation of pipelines was justified.

As a result of this competitive situation, MAPCO, like many other petroleum pipelines, has never realized the rates of return allowed by the ICC and FERC. Thus, our primary concern is not that we will be unable to meet the burden necessary to justify the rates that we charge for our service. Rather, our concern is that the industry cannot continue to grow and expand if we are subjected to the interminable delays, expenses and regulatory lag associated with meeting this burden.

I am a former railroader, having served at one time as Chairman of the Katy Railroad in the late 50's, and I have personal knowledge of the devastating effect of heavy-handed government regulation and regulatory on the lag on the railroad industry during the post-war period. You know the result as well as I do.

If FERC attempts to regulate oil pipelines in the same manner in which it regulates gas pipelines and electric utilities, I am certain that it is going to lurch, skid and slid deeper and deeper into a regulatory nonsense. The result will be to condemn this highly successful, financially viable, vibrant industry to a fate worse than sudden extinction, namely strangulation.

As you have heard from others, and as you probably already know, the FERC has spent five years, has received thousands of pages of testimony and hundreds of pages of exhibits, but has yet to render any decision in the Williams Case, the generic case that FERC is using to set regulatory precedent for the entire industry. A decade after the initial protest to the ICC, and more than five years after the transfer to the FERC from the ICC, there is still no final decision in the Williams Case.

In this regard, I must point out that MAPCO and similar companies would not be available to provide ready competition if the Williams Case decision results in the type of years-long proceedings of the kind to which the natural gas pipeline industry has been subjected. We desperately need the freedom to respond quickly to a competitive situation, and to expend our efforts in the construction of new pipelines,

rather than meeting a regulatory burden which is certain to grow without deregulation.

While the FERC has struggled with the Williams Case, virtually all new tariffs being filed have been automatically suspended for one day, and then allowed to go into effect, subject to refund to the shipper if found to be excessive. Typically this has been true regardless of the size of any new tariff increase or a pipeline's historical rate of return. Substantial potential liabilities for refunds, with interest, have been incurred on a industry-wide basis.

To understand the uncertain regulatory environment in which the industry has been found to operate, one need only look at the number of pending tariff increases already suspended and in doubt. MAPCO alone has 50, the industry has a total of more than 2,000. I shudder to think of the months stretching into years for the FERC to settle the appropriate rate levels and related rate matters for each of the more than 100 pipelines, considering the snail's pace at which gas and other utility cases move before the FERC.

In all fairness to FERC—both its current and past members—we cannot blame them for their attempts to regulate our rates because they are required to do so by a statutory mandate that is almost a half-century old.

I believe a good explanation for FERC's failure to find an appropriate and acceptable methodology—and good arguments for enactment of the bill—are contained in the remarks of two Senators which appeared in the July 29, 1981, Congressional Record. Senator Nickles observed: "It is time, not to reevaluate the method of regulating petroleum pipeline rate regulation, but to reevaluate the need for any petroleum pipeline rate regulation. The petroleum pipeline industry is characterized today by pervasive competition, and it is competition, not government regulation, which should be allowed to set petroleum pipeline rates."

Senator Wallop, noting that "the federal role in pipeline ratemaking is a vestige of government involvement initiated over four decades ago," stated that the effort on behalf of rate deregulation "recognizes that competition in the petroleum pipeline industry has reached the point where government regulation or ratemaking no longer makes sense from either a public policy or economic perspective."

Two days later, addressing the same issue on the House side, Representative Synar, a member of the House Energy and Commerce Committee, summed up the arguments briefly but cogently, remarking, "Where there is no need for regulation, there is no satisfactory way to regulate." This brings me to a brief discussion of the opportunity, to which I previously referred, that this Congress has to extricate the oil pipeline industry from its present regulatory nightmare. To get out of this administrative morass and to preserve a viable and healthy industry, the Interstate Commerce Act should be amended to remove administrative authority to set or suspend rates for oil pipelines.

An administrative solution is not feasible because it cannot provide the industry with the certainty needed for long-term planning. Petroleum pipelines need the flexibility to set their rates in order to respond to present economic uncertainties and modern-day inflation. Petroleum pipelines must be able to earn returns that will attract the needed billions of dollars from financial markets, where interest rates have been at unprecedented levels, to build new lines and provide the expansions necessary to the national economic well-being.

The removal of government controls over rate levels does not mean that the petroleum pipeline industry will then be totally free from constraints. Other very real market constraints exist. Today's pipeline industry is extensive and shippers have multiple options to serve their transportation needs. Intramodal and intermodal competition, as will as shipper's exchanges, make virtually every pipeline a potential competitor with every other pipeline and other forms of transportation used to ship petroleum. In MAPCO's case, since our Mid-American Pipeline system was constructed—from the producing areas of the Southwest to the upper Midwest market area—nine directly competitive pipelines have entered our service area to compete with us.

Moreover, the marketplace exercises further control over rates by virtue of the fact that the ultimate markets for petroleum products transported through pipelines are themselves controlled by competition. The impact of rate deregulation on the consumer would be negligible. Based on testimony provided in the Williams Case, even if you were to double the earnings of the pipeline industry, the cost to the consumer would be less than a penny per gallon. I hasten to add that it would be extremely unlikely for a pipeline to double its earnings, due to real world competition factors—including the existence of a company like MAPCO.

Therefore, built into the marketplace and the legislation before you are adequate constraints on the oil pipeline industry. These constraints, in contrast to the artifi-

cial constraints of FERC regulation, permit a businessman to make economic decisions with some certainly based on an analysis of the marketplace instead of the often irrational and interminable machinations of a federal bureaucracy.

At this point, I would like to address briefly two issues raised by Administration witnesses at earlier hearings. As I have already mentioned, those witnesses felt that total deregulation, not just rate deregulation, was in order.

Perhaps from a legal or philosophical viewpoint, total deregulation would be more consistent with the findings of substantial competition within the industry. As I said at the beginning of my testimony, however, my concerns are those of a businessman. From the business viewpoint, it is rate regulation that poses a real threat to the industry and it is rate deregulation that provides the opportunity to help the industry and foster competition within it.

From my knowledge and experience, other forms of regulation, such as our common carrier obligations under the ICC, have not posed a threat to the industry nor are they likely to do so. As businessmen, we at MAPCO want to keep and attract customers and we know to do that we must treat them equally and fairly. Judging from the lack of any complaints, we and most other shippers have been successful. Thus, as a businessman, I see no reason to tamper with success, or to undermine the trust and goodwill that we have been able to build with our customers by going further than is needed to solve the problem.

The bill, S. 1626, is what we want. It is what we need—and what we need now. Action on it should not be delayed for a potentially never-ending debate on the adequacy of our antitrust laws or the purity of economic philosophy.

Administration witnesses also suggested, without specificity, some form of "reregulation". I have not seen any specific proposals, so I cannot offer specific comments. Generally speaking, however, I fear that playing with the concept of reregulation is somewhat akin to putting the proverbial bull in the china shop.

Remember that the Administration witnesses were quite unclear as to just what they were talking about and there were substantial differences in the few specifics that were offered by the various witnesses. In the months since the May hearings the Administration has not come up with a concrete proposal, but, we are told they are working on it. What do we have? We have uncertainty within the industry as to how, where, and when it is to be regulated or reregulated. Further, any so-called "reregulation" concept we can imagine appears to involve an unimaginable amount of additional complexity, regulatory delay, and cost, as well as further years of uncertainty.

Again, I urge you to read Dr. Mitchell's study and the testimony of the Administration witnesses themselves. The industry is competitive, at least in the lower 48 states. I suggest that the Administration is trying to come up with a cure for a nonexistent ill. Just as there is no appropriate way to regulate a competitive industry, there is no appropriate way to "reregulate" that industry.

The bill, S. 1626, is a well designed tool to end uncertainty. Please do not allow it to become a vehicle for even more uncertainty. If you have any fears that the industry someday, somehow might lose its competitive nature, I submit that the vehicle for reregulation already exists. It exists in the legislative powers vested in you by the Constitution. I would certainly have no objections if you, in passing S. 1626, would direct the FERC to prepare and submit regular reports to Congress on the performance of the industry under rate deregulation.

As the founder of a sizable independent pipeline, the bottom line for me is a plea to this Congress—don't make it impossible for some other entrepreneur to start and operate such an enterprise in the years ahead because if you do, the shipping public, the consumer, and the nation's petroleum industry will be the loser.

To permit more burdensome and restrictive regulation of this industry will make the creation and development of independent pipeline systems such as MAPCO no longer attractive. It will create a disincentive for pipelines, particularly independents, to stay and grow in this business.

Someone may still build pipelines, but it won't be MAPCO. And those pipelines will be built by an industry growing less and less competitive, serving consumers who must look to the discretion of bureaucrats for, at best, a portion of the protection they now enjoy from free and open competition.

I urge you again to support and pass S. 1626.

Statement of the National Council of Farmer Cooperatives

The National Council of Farmer Cooperatives hereby submits its written comments for the hearing record on the issue of oil pipeline deregulation and particu-

larly, from our perspective, the effects deregulation might have on agriculture and rural American.

All Communications with respect to this matter be addessed to: R. Thomas Van Arsdall, Vice President, Energy Resources, National Council of Farmer Cooperatives, 1800 Massachusetts Ave. N.W., Washington, D.C. 20036.

INTEREST OF THE NATIONAL COUNCIL

The National Council of Farmer Cooperatives is a nationwide association of cooperative businesses which are owned and controlled by farmers. Its membership includes 118 regional marketing and farm supply cooperatives, the 37 banks of the cooperative Farm Credit System, and 31 state councils of farmer cooperatives. National Council members handle practically every type of agricultural commodity produced in the United States, market these commodities domestically and around the world, and furnish production supplies and credit to their farmer members and patrons. Two-thirds of United States farmers are affiliated with one or more cooperatives. The National Council represents about 90 percent of the more than 6,400 farmers cooperatives in the nation, with a combined membership of nearly 2 billion farmers.

Among the cooperatives the National Council represents are supply cooperatives which own and operate five efficient refineries which have an aggregate production capacity of about 310,000 barrels per day, and whose yields of gasoline, diesel fuel and heating oil amount to approximately 85 to 90 percent of their refined products. While this represents only about two percent of United States refining capacity, cooperatives market petroleum products in more than 40 states and currently supply about 45 percent of all on-farm fuel and a large portion of rural needs.

SUMMARY OF THE NATIONAL COUNCIL'S POSITION

The National Council would like to register strong opposition to oil pipeline rate deregulation. We do so even though some of our members either own oil pipelines outright or engage in joint ownership in order to overcome problems they have encountered as captive shippers. These same co-ops also are highly dependent on pipelines in which they have no ownership.

Many cooperatives and rural areas in general are highly dependent on a single pipeline company which delivers crude oil and petroleum products to their region. No other method of transporting crude oil or refined product (motor carrier, railroad, barge) to these areas is anywhere near as economically feasible as a petroleum pipeline. Therefore, we believe the market power possessed by most oil pipelines constitutes a sufficient danger to justify the retention of Federal rate regulation.

Future competition is also unlikely from other pipelines, as market demand probably will remain fairly constant in most rural areas with a relatively fixed demand for product at a specific destination. The first pipeline in the market, if that pipeline meets most of the minimum market requirements, will enjoy a cost advantage over potential competitors in that same market. Therefore, competition will not materialize because of the inherently disadvantageous position of new pipelines. Because of the characteristics of the market, the first pipeline, if properly sized, becomes a monopolist in that market. As a result, many petroleum pipelines, in the absence of economic rate regulation, have the opportunity and the power to extract excessive tariffs from any of their customers and shippers.

Pipeline ownership is dominated by major, vertically integrated oil companies which use them to transport their own products. Under current Federal rate regulation, shipper-owners and non-owner shippers pay the same tariff. However, shipper-owners are at a distinct competitive advantage because the portion of the tariff in excess of actual transportation costs is returned to them in the form of dividends. The possible imposition of excessively high tariffs, in the absence of regulation, would sharply increase the distinct competitive advantage shipper-owners already possess.

Conversely, while we believe deregulation is not the answer, neither is the status quo. It is our belief that Federal regulation of the oil pipeline industry has not been that effective over the years. A GAO study released in July 1979 supported this view and recommended that the Federal Energy Regulatory Commission implement rate reform. It also urged that "criteria should be established for determining the justness and reasonableness of oil pipeline rates and sufficient regulatory procedures implemented to assure that the criteria are followed." [1]

[1] "Petroleum Pipeline Rates and Competition—Issues Long Neglected by Federal Regulators and in Need of Attention." (U.S. General Accounting Office, 1979.)

We deplore the fact that the FERC has not taken these important steps and would hope that they will proceed to do so expeditiously. We feel action is necessary to assure that the interests of shippers, as well as the public at large, are adequately represented in arriving at fair and reasonable pipeline rates.

Despite the fact that Federal regulatory involvement in rate-making has been limited, we are of the strong opinion that an administrative forum must continue to exist to afford the opportunity for shippers to challenge economically unwarranted increases in pipeline tariffs. Such a regulatory forum is essential, given the market power possessed by most oil pipelines.

Due to their geographic location, many rural areas do not have any alternative forms of transportation that could compete economically with oil pipelines. High and unreasonable increases in pipeline tariffs due to deregulation would increase the farmers' costs of production, as well as impacting the entire agricultural and rural economy. Given the serious state of today's farm economy—net farm income levels are forecast to be the lowest since the Great Depression—farmers can ill afford any unreasonable increases in production costs.

In conclusion, we believe petroleum pipelines in general have the characteristics of natural monopolies. The very nature of this system dictates that, with few exceptions, true competition as a disciplinary force in the marketplace is not practicable. It is a long-established principle that where such conditions prevail, it is an appropriate and necessary role of the Federal government to assure equitable treatment of the user community while maintaining a fair rate of return for investors. Members of the National Council are carefully reviewing the existing regulatory structure in a search for alternatives which would more effectively accomplish these objectives.

We look forward to working with the members of this Committee during the continuing debate on this critical issue.

STATEMENT OF WILLIAM P. BUSH, PRESIDENT, MARATHON PIPE LINE CO.

My name is William P. Bush. I am President of Marathon Pipe Line Co., a position I have held since 1968.

It is very heartening to find a consensus developing between industry and government witnesses over the deregulation of oil pipelines. The testimony presented to this Subcommittee unequivocably supports the position of the Association of Oil Pipe Lines that any continued attempt to regulate the level of rates of the competitive oil pipeline industry is not only unnecessary, costly, and anachronistic in terms of the trend of the last decade to remove burdensome government regulation from industry, but can actually be destructive. It is imperative for the economic vitality and defense of this country that there be new oil exploration, which requires an economic incentive for new oil pipelines to marginal fields, and that the current oil transportation network be expanded in order to increase mobility. The prospect of continued (and of even more intensive) regulation of the rate level of oil pipelines in any form is a serious deterrent to the achievement of those vital national objectives.

I appreciate the opportunity to submit this additional statement for the record in order to develop three points which I hope will be helpful to the Subcommittee in its deliberations on S. 1626. First, I would like to describe competition in the oil pipeline industry as seen from the standpoint of a medium to large company. Second, I will briefly discuss how oil pipelines are financed, the current necessity for joint ventures, and the relationship of those factors to deregulation. Finally, I will stress some of the reasons why it is urgent that deregulation be placed upon a faster track in order to eliminate a barrier to the required expansion of the oil pipeline industry.

COMPETITION

Other witnesses have traced the unique history of the regulation of oil pipelines. The Hepburn Act of 1906 put regulation in place as a "fallout" from the major focus of Congressional intent which was to break the railroad rate discrimination imposed by the Standard Oil Trust. Oil pipeline regulation, a relatively minor aspect of that legislation and not even the subject of any significant debate, was designed to stop the Trust from requiring independent producers to sell their oil to the Trust if they wanted to ship over the vast transportation network it controlled. A quick solution to that problem of discrimination was to make oil pipelines common carriers under the Interstate Commerce Act, coupled with the imposition of a freer play of competi-

tive forces by not imposing regulatory control over entry into the oil pipeline business.[1]

For over seventy years the Interstate Commerce Commission, in a remarkable variance from the usual bureaucratic tendency to expand jurisdiction, did just what Congress intended. It did not make any effort to "fine tune" the level of rates as it did in the case of railroads and trucks, or as the Federal Power Commission did in the case of gas and electric utilities. Instead, the ICC was content with establishing general rate of return guidelines in the 1940s and thereafter applying what has been correctly called regulation "with a light touch." The results were extraordinary. Sufficient capital was raised to construct one of the most successful transportation systems in America. Shipper complaints were almost non-existent. Lengthy and expensive rate proceedings were avoided. No wonder Congress did not intervene at any time during this seven decade period to tell the Commission to do anything differently.

One of the major reasons for the success of the "light touch" was because of the freer play of competition between oil pipelines permitted by Congress. The number of oil pipeline companies, and the competitive environment (both intramodal and intermodal) which exists today, are light-years away from what they were in the heyday of John D. Rockefeller I, back in 1906. Competition has become the principal determinate of rate level, and one of the apparent results has been that rates for the transportation over oil pipelines have increased at a rate far below any standard price index. Thus, the ICC recognized, and implemented, the principle that regulatory interference in the market place should be avoided when competition exists as the principal force behind the setting of reasonable rates.

This is the environment I have known in Marathon Pipe Line Company ever since I joined it in 1948. A succession of positions has involved me in laying pipe, buying rights-of-way, engineering, designing, constructing, managing, budgeting, and arranging financing for all different kinds and sizes of oil pipelines. I experienced a competitive industry and fully believe that most decisions affecting my company, including rate level, were based upon that fact.

The fact is still true. In the *Williams* case, currently pending before the Federal Regulatory Energy Commission, many oil pipelines have presented examples of the competitive environment within which they operate.[2] Some however, said that this was not conclusive because only "example" had been given. Accordingly, the Association of Oil Pipe Lines retained Professor Edward J. Mitchell, Professor of Business Economics of the University of Michigan, to prepare "A Study of Oil Pipeline Competition." That very detailed study has been submitted to this Subcommittee for inclusion in the record. It demonstrates unequivocably that the industry is competitive and is not a "natural monopoly." It also finds that profits of the industry have been reasonable—near the median for U.S. industry—and concludes that competition (not regulation) has been the principal constraint on price. Finally, the study demonstrates that there would be no significant changes in rates or profits with economic deregulation.

The Mitchell study is also supported by the testimony of Robert C. Means, Director, Office of Regulatory Analysis, Federal Energy Regulatory Commission which reflects the continued existence of powerful intermodal and intramodal competition faced by the oil pipeline industry.

In the light of this testimony there should no longer be any dispute that competition is the principal determinant of rate level for the oil pipeline industry. This conclusion is also supported in the record of this Subcommittee by some specific examples of competition encountered by smaller and/or independent oil pipelines. I think it would be helpful, however, to supplement those examples with the case history of a specific pipeline system with different characteristics: Platte Pipe Line Company which is a corporation owned by five oil companies, including Marathon.

Platte was incorporated in 1950 and serves an area between the Rocky Mountains and the Midwest. The history of this line will show how in the "real world" of oil pipeline construction, external events—most particularly actual and potential competition—can change the economics of an oil pipeline, and will demonstrate that the operations of oil pipelines closely resemble those of companies in the environment of free enterprise, rather than those of natural monopolies where the government must substitute itself for the free market to set prices.

Planning the Platte Pipe Line.—Service Pipe Line (Amoco) was serving the Rocky Mountain-Midwest area with a line of 50,000 b/d capacity at the time the Platte line

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[1] *United States* v. *Champlin Refining Co.*, 341 U.S. 290, 297 (1951); Johnson, Arthur M., Petroleum Pipelines and Public Policy—1906-1959 (1967) pp. 20-23.

[2] Williams Pipe Line Company, Docket Nos. OR79-1.

was envisioned. With an original capacity of over 100,000 b/d, Platte was designed to provide a competitive market for transportation of the area's crude oil to Midwest oil refiners. Area reserves were then approximately 1.3 billion barrels and, as anticipated, the new line stimulated further exploration and development in the area. Platte was the first major pipeline built for the purpose of transporting crude oil to an area market rather than providing a source of crude oil to a refinery.

Construction difficulties.—The project was conceived prior to the Korean conflict. A national emergency was declared before the pipe could be delivered and a governmental stop-gap policy diverted steel to military use. When the Controlled Materials Plan was eventually imposed, Platte was certified as essential to the national defense. Steel supply was very tight and pipe originally scheduled to be delivered during the first half of 1951 was rescheduled to July of 1952. The last pipe was further delayed by a steel strike and did not arrive until October. The line was finally ready for operation and the first oil reached Wood River, Illinois, on December 8, 1952.

Competition.—The Platte system originally had a delivery capacity of 105,000 b/d. Deliveries on the system increased rapidly following start-up, and additional booster stations and pumping equipment were installed to increase the long haul capacity to 171,000 b/d in 1953. Additional construction was planned to increase this capacity to 192,000 b/d. While Platte was in the midst of installation and planning for this additional capacity, two competing pipeline facilities were built. The 50,000 b/d Amoco system was replaced with 22-inch and 24-inch line and, when completed in 1954, had an estimated capacity of 125,000 to 130,000 b/d. This line roughly parallels the Platte system and is capable of serving approximately the same refining areas as Platte. The Arapahoe system, which is an 18-inch line from southwest Nebraska and northeast Colorado to Humbolt, Kansas, was placed in operation in March 1955 with an estimated capacity of 80,000 b/d. With the installation of these two competing facilities the deliveries on Platte showed significant decreases. Plans to increase the Platte capacity to 192,000 b/d were halted in midstream.

Then, in 1957 the Tecumseh Pipe Line was built from Griffith, Indiana, to Cygnet, Ohio. Volumes of about 20,000 b/d which had moved over the Platte system from Salisbury, Missouri, to Wood River, Illinois, were lost by Platte via other systems in Ohio. This was partially offset by increased field production levels caused by the Suez crisis.

Expansion.—Several smaller lines were tied into Platte receiving points in 1958 and 1959 at Casper, Wyoming; Redington, Nebraska; Harrisburg, Nebraska; Glenrock, Wyoming; and Oregon Basin, Wyoming. In total, these lines increased Platte volumes about 10,000 b/d. In 1961, the Glacier Pipe Line from Cut Bank, Montana, to Byron, Wyoming, was connected to Platte. This allowed about 7,000 b/d of Canadian crude and condensate to be delivered to Platte. Volumes from these systems brought the system to an average of 180,000 b/d short and long haul deliveries in 1963. Thereafter, the volumes steadily decreased through mid-1967.

Significant new oil discoveries were made in southeast Montana and eastern Wyoming in late 1966. In addition, large volumes of Canadian crude started moving into the Platte System from the Glacier system and Butte system in 1972, reaching their maximum levels in 1974 when, during May, total deliveries of 231,000 b/d were achieved.

Contraction.—With the curtailment of Canadian imports, the future for Platte Pipe Line again became bleak. Total volume deliveries averaged 107,959 b/d for the year 1978, less than half of the peak delivery rate attained in May 1974.

Platte is thus a good example of a pipeline whose varying fortunes have been the result of the forces of competition as well as extraneous and unforeseeable risks. Further, it is a noteworthy epilogue that the competing Arapahoe system, also a victim of falling volumes of crude oil, has been sold and converted to a natural gas pipeline. Such an alternative use of a pipeline in place is an unusual happenstance.

Can anyone read this history and conclude that oil piplines are the type of companies which should be subject to rate regulation applicable to public utilities? Of course not! That is why economic deregulation is so reasonable for the oil pipeline industry.

One final note regarding competition. There is, to our knowledge, no "perfect" industry in the sense that pockets of monopoly might be found in any industry. But that fact is not a justification for abandoning the free enterprise system in the United States and replacing it with governmentally imposed price regulation. The same should be true in the case of rate regulation in the oil pipeline industry. Further, there is simply no evidence in the record before this Subcommittee—or anywhere else to my knowledge—which would demonstrate that the benefits of trying to keep a rate regulatory scheme in place to "take care" of whatever pockets of mo-

nopoly might exist in the oil pipeline industry would even offset the huge cost of such administrative regulation. Finally, as all witnesses before this Subcommittee have agreed, transportation costs have only a miniscule effect upon the ultimate price to the consumer—the "price at the pump." There is, therefore, no justification for either a continued or intensified regulation of the rate level of oil pipelines.

JOINT VENTURES

It is important to eliminate any implication that larger oil pipeline companies should remain under rate level regulation, particularly if they are owned by an oil company or a group of oil companies. Nothing could be more unrealistic or unjustified. Because large companies are just as competititve as small companies, and because competition is the primary determinant of the rate level of both small and large companies, deregulation must be put in place for all oil pipelines.

As background for making this important point, it should be noted that when Congress was considering, back in 1906, the inclusion of oil pipelines under the Interstate Commerce Act, it had before it the alternative of including oil companies under the "commodities clause" amendment prohibiting carriage by "common carriers" of products in which they have an interest. Congress specifically refused to put oil companies under the "commodities clause" thereby permitting them to finance and own oil pipelines in which their, and other shippers', oil could be carried.[3]

The wisdom of Congress in thereby permitting the development of integrated oil pipeline companies can neither be disputed nor underestimated. The bulk of the funds for the construction of oil pipelines has come from oil companies and the industry has thus been able to raise the necessary capital to construct a transportation system which has permitted the flow of energy to all parts of the nation. The reasons why this is so are quickly evident from a review of the risks of the oil pipeline industry beginning with basic economic imperatives, many of which have already been illustrated in my recitation of the history of the Platte Pipe Line Company:

Most oil pipelines are high volume, inflexible, capital intensive modes of transportation. They are generally not built in an area until the basic market demand has already developed or is expected to be developed. Major pipelines, to be viable, must be constructed from increasing and steadily available supply areas to markets which are expected to grow. Construction of a pipeline to a market can be justified only if the transportation cost is competitive with that of the existing supply systems.

These considerations are as applicable to additional lines as they are to the first line into an area. In the case of additional lines, the new line must be a competitive vehicle to supply the expanded volumes or it will fail to attract the necessary barrels to make it economic.

In growing markets, all lines, at the outset, will be built with sufficient capacity to transport for all shippers not only volumes then available, but additional volumes that are expected to be available for shipment in a reasonable time. There are significant economic costs whenever a pipeline system's capacity does not fit the market need. If the pipeline is too small, the company may be forced to operate in an inefficient throughput range with higher unit costs. If the pipeline is too large, the construction and unit transportation costs will be higher than the demand justifies. Therefore, there are strong incentives for a pipeline company to size the pipeline optimally to meet demand. If it does not, its unit costs may make it vulnerable to competition from other transportation sources—including another pipeline which is more economical because it is appropriately sized to meet the demands of the market.

The oil market is a layered market—crude oil and refined products. Although separate, these two actually compete with each other in supplying the eventual consumer. The demand for crude oil is derived from the demand for products. Therefore, crude supply via a major pipeline competes on a comparable cost basis with refined product lines, and with efficient waterborne transport of domestic or foreign crude and receipts of product by any other form of transportation. On the other hand, a major product line competes with not only other product lines and efficient waterborne transportation of products, but also with crude oil delivered efficiently to and refined in the market area. A new refinery located in a market area is a direct competitor and would greatly reduce the utilization of the product system. Further, in both categories, each line faces potential competition from duplicating pipelines.

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[3] Johnson, Arthur M., Petroleum Pipelines and Public Policy—1906-1959 (1967) (pp. 28-31).

Economics compel the construction of the largest diameter pipeline possible. The economies of scale are so great that should a line be built too small, it would soon lose its business to a large diameter pipeline that would be better able to meet demand.

Finally, in addition to evaluating economic factors in considering whether to construct a new oil pipeline, there is the critical question of an in depth evaluation of risk. This is so because financial commitments for pipeline construction generally range from 20 to 30 years or more. If actual shipments fail to meet projections and/or tariffs fail to cover costs, including a return on investment, there still remains the necessity to meet a heavy front-end investment. This exposure is substantial because pipelines are so highly capital intensive. Substantial costs means increased risk for, if one "guesses wrong," huge losses can be involved.

These risks are substantial. There are some supply/demand risks within the ambit of normal business risks and susceptible to economic forecasting. But the potential margin of error, coupled with those risks beyond the control of management, are also substantial. My earlier recitation of the history of the Platte/Arapahoe pipelines is illustrative of only a few of those risks. That history does not even touch upon all of the current potential risks such as the development of new energy resources, and political embargoes (such as the OPEC embargoes).

Given these perceptions of risk, history has proven that major pipelines would not have been built if petroleum companies having the need did not underwrite the risks of construction and provide the related financial assurances required by lenders. The simple fact of the matter is that if a new oil pipeline, particularly a large one costing billions of dollars, is required, the oil companies could sit around until doomsday waiting for some banking group or some local entrepreneurs to come in and build the line.

Moreover, it must be recognized that when the oil companies undertake the risks of new construction, it is the consumer who benefits. The only reason why oil pipelines are constructed is to provide a means of transportation more economical than alternative means currently available. This was true for the Colonial and Capline pipelines; it was for TAPS; and it will be true for the next oil pipeline constructed.

Vertical integration and joint ventures have, therefore, become an economic fact of life of the oil pipeline industry without which there would simply not be, or continue to be, such an industry. But that fact has in no way changed the competitive nature of the industry—simply its structure. The "big" joint venture, vertically integrated, oil pipelines compete just as strongly as do the smaller ones. In other words, "bigness" has not eliminated competition. On the contrary, it has simply made it more intensive—and the results more significant—as was the case when Plantation lost millions of dollars in competition with Colonial. Both of these companies were "big" and both were "integrated."

EXPEDITION

Finally, if competition is the primary determinant of the rate level of oil pipelines, the question might be asked "what's the hurry about eliminating rate regulation?"

The answer is simple. American corporations do not make million or billion dollar investments blindly. They make cash flow analyses to determine probable earnings, and make a decision, for or against, depending upon the results, frequently in comparison to other available investment opportunities.

The oil pipeline industry is in an impossible situation at this time. As I indicated earlier, throughout my professional life competition has always been the primary factor in rate level and has always been an important factor in construction decisions. However, an additional uncertainty has crept into the system. Some rates of Williams pipeline were challenged by shippers early in the 1970s—the first such challenge of the reasonableness of oil pipeline rates in decades. A reviewing court suggested that oil pipeline rate regulation—particularly its methodology—should be reviewed.[4] Then, when the Department of Energy Organization Act of 1977 transferred jurisdiction over oil pipelines from ICC to the Federal Energy Regulatory Commission within the DOE, some urged (erroneously, in our view) that the court decision required a change, not just a review, of regulatory methodology. A case was instituted to determine what rate-making principles should be applied to oil pipelines and the "light touch" applied by the ICC for decades appeared to be seriously threatened by the substitution of utterly inapplicable public utility type regulation.

[4] *Farmers Union Central* v. *Federal Energy Regulatory Commission*, 584 F.2d 408 (D.C. Cir.), cert. denied, 439 U.S. 995 (1978).

Today, years later, that case is still pending before the Federal Energy Regulatory Commission.

These events have placed the oil pipeline industry in an impossible position: rate increases have been suspended subject to refund pending the F.E.R.C.'s decision—there are now over 2,000 such suspensions, and uncertainty about what kind of rate methodology will be adopted has left the industry without the foggiest idea of what kind of earnings are to be expected from new construction.

Such a situation cannot continue if necessary new construction of oil pipelines costing billions of dollars is to be undertaken in America. Without some knowledge of potential earnings, construction (and hence exploration) in marginal areas may be delayed. Nor can it be assumed that just because it would be more convenient, and cheaper, for an oil company to finance, or participate in the financing with other oil companies, of a new line, such a line will automatically be built whatever rate regulation scheme is in effect. Finance committees of oil companies have a wide range of investment and expansion opportunities before them and an oil pipeline with an uncertain earnings future may be rejected.

It is also important to emphasize, however, that such a situation will by no means be eliminated simply by a decision in the *Williams* case. Assuming, as we all do, the most favorable (and sensible) decision would be to retain the current valuation rate base methodology used by the I.C.C., the question still remains of the level of the rate of return which will be authorized by the Commission. Investors' perception of inflation rates are changing all of the time—unfortunately, to levels heretofore unknown in recent history. Under these circumstances it is difficult to assure the absence of a lag between actual inflation and its eventual reflection in authorized rates of return. Nor can there be any assurance of the political acceptability of rates of return accurately reflecting prevailing inflation rates. And even assuming some kind of rate of return guidelines were established to cover the problem of "lag," there is always the concern that administrative attitudes will change. We must keep in mind in this regard that the decision to build or expand a pipeline—or not to do so—is in reality a 20 to 30 year investment decision.

Thus, the *Williams* decision, even assuming the best of all possible outcomes, will be no answer to deregulation now. Williams will only purport to answer problems which do not exist and, instead, bring in a whole new set of problems. There is only one answer. There should be no regulation whatever of the rate level of the oil pipeline industry when, as in the case here, competition is and will continue to be the primary determinant of rate levels.

I want to thank the Subcommittee for the opportunity to present this statement. Deregulation is vital to the future of this industry.

STATEMENT OF WILLIAM B. READ, PRESIDENT, LOOP INC.

LOOP Inc. supports S. 1626 (H.R. 4488 and the technical amendments contained in H.R. 6815) which will reform federal regulation of oil pipelines.

LOOP Inc. is the owner and operator of the United States' only deepwater port and enables the efficient usage of supertankers to directly deliver imported crude oil to the United States. The "Deepwater Port Act of 1974" gave ratemaking jurisdiction for deepwater ports to the Interstate Commerce Commission. Ratemaking authority was subsequently transferred in 1977 to the Federal Energy Regulatory Commission (FERC) by the "Department of Energy Organization Act." Although LOOP is unique and differs from oil pipelines, FERC has attempted to regulate LOOP as if it was an oil pipeline. Rate regulation of deepwater ports makes no more sense than rate regulation of oil pipelines.

THE MARKETPLACE REGULATES ALL INVESTMENT IN DEEPWATER PORTS

Deepwater ports are regulated by the most efficient mechanism available—the marketplace. Feasibility studies were prepared for deepwater ports off eleven states. Only in two of those states, Louisiana and Texas, was there perceived to be sufficient demand to justify attempts to obtain a federal license from the Department of Transportation. LOOP was the only organization to accept such a license; however, the economic potential of LOOP was not assured. Although LOOP had sixteen shareholders in early 1974, by the time of acceptance of its license in 1977, eleven shareholders had withdrawn, deciding that the return they could earn did not justify the inherent risks.

DEEPWATER PORTS ARE NOT LIKE REGULATED PUBLIC UTILITIES

While there are a number of similarities between LOOP and regulated public utilities, such as natural gas transmission companies or electric generation companies, there is a fundamental difference—the degree of business risk in the respective enterprises.

Both LOOP and public utilities have their rates set by regulatory authorities. The rates are formulated so as to allow the company to pay its expenses, recover its investment and earn a fair return on its invested capital. Unlike public utilities though, LOOP may not be able to charge its full authorized rate because of intense and effective competition in the service it provides.

A public utility is granted a franchise or certificate of public convenience and necessity to provide a particular service to a particular geographical area and generally will be protected from competition within that area for that service. While the utility may face competition from alternate energy sources, i.e., a natural gas company competes against electricity and coal usage, it has a captive market for its specific service. Thus, a utility is able to charge its authorized rates and if prudently managed, earn its authorized rate of return on invested capital.

LOOP is faced with intense competition in the identical service it provides—the transportation of crude oil—from the traditional methods of imported crude oil delivery of transshipment, lightering and direct delivery by small tankers. This competition will prevent LOOP, at least in its early years of operation, from charging its full authorized rate. It is hoped that in later years, LOOP's smaller proportion of variable costs to fixed costs will allow it to charge its authorized rate; however, this is not guaranteed.

It should also be noted that unlike utilities, LOOP neither owns the products it carries nor buys and sells energy, but merely transports for hire. This should be contrasted with a natural gas transmission company which buys its gas at the wellhead, thus ensuring a stable source of supply, and enters into long-term contracts with consumers, frequently with minimum bills or take-or-pay provisions. LOOP does not have this security, if demand for its service declines, its profits will not be insured by guaranteed usage commitments.

THE MARKETPLACE DETERMINES LOOP'S BUSINESS VOLUME AND REGULATES ITS PRICES

Just as the marketplace has regulated the investment in deepwater ports, the marketplace has also regulated the prices which LOOP can charge for its services. LOOP's rates, which must compete with the rates of tankers, have been impacted by the surge in crude oil prices which has deflated demand and changes in sources of crude imports.

Since 1972, the price of imported crude petroleum has soared from $2.40 to $34.00 per barrel—an increase of over 1,300 percent. U.S. domestic crude oil pices have been decontrolled and now have risen to a par with foreign prices. Those increases in prices, as well as periodic curtailments in supply, have created a conversation ethic changing the U.S demand for crude petroleum. Projections made in early 1970s by the U.S. Department of Interior and National Petroleum Council called for U.S. demand for petroleum to exceed 20 million barrels a day (MMB/D) in 1980. In 1978, the U.S. consumed 18.8 MMB/D, however, by 1981, demand had fallen to 16.0 MMB/D. Consumption for the first half of this year has fallen further to 15.6 MMB/D. Since U.S. production has remained the same, the fall in consumption has been taken up entirely by a reduced level of imports. The U.S. Department of Energy in the "1981 Annual Report to Congress" has projected U.S. petroleum demand in 1990 to be 15.7 MMB/D, virtually the same as today and as in 1972.

Not only has there been a fall in imports, but there has been major changes in the sources of U.S. imported crude oil. Petroleum imports from Mexico have risen from 0.2 MMB/D in 1977 to 0.8 MMB/D, surpassing Saudi Arabia as the largest supplier to the U.S. Together, imports from United Kingdom's and Norway's North Sea production, now existent seven years ago, also has exceeded Saudi Arabian imports in recent months. The North Sea, and expecially Mexico enable much shorter tanker routes than movements from the Arabian Gulf. Unfortunately, LOOP was built to handle very large crude carriers (VLCCs) which are economic only over the long-haul tanker routes, such as from the Arabian Gulf.

With LOOP's 100 percent dependence on long-haul imported crude petroleum, the volume and business prospects are significantly different today. When LOOP was originally conceived, future expansion was anticipated from the Phase I throughput capacity of 1.4 MMB/D to 2.4 MMB/D in Phase II, and to ultimately in Phase III to 3.4 MMB/D. Optimistic growth projections resulted in stipulations in the license offered to LOOP by the Department of Transportation that LOOP would have to fur-

ther expand past Phase III if warranted by market demand. It seems highly unlikely today that LOOP will ever be expanded past its Phase I capacity. The Company's throughput during 1982 has averaged only 250,000 B/D, less than 20 percent of its current capacity.

Much greater demand was also anticipated for tankers. LOOP was designed to handle up to 700,000 ton tankers; however, the largest tanker afloat today is the 556,000 ton *Seawise Giant*. The trend to larger tankers has stopped, but not before a huge surplus was created. Last year, the demand for tankers was 180 million tons; however, supply was 320 million tons, or 70 percent in excess of demand. Greater reliance on nearby sources of foreign crude oil, and the 10 to 15-year lifetime of tankers indicates that the tanker surplus will continue for the foreseeable future. Tanker rates have reflected this surplus market and today are at approximately the same level as in 1973, even though the Consumer Price Index has doubled.

LOOP's competition is tankers which can deliver crude petroleum directly to inland ports and, therefore, LOOP's tariffs are tied for the level of those unregulated water carriers. Thus, LOOP's business prospects have been doubly hit—first, volumes have fallen; and second, such an oversupply exists in LOOP's competition, tankers, that competitive rates have not been able to reflect inflation. Low volumes and low tariffs indicate LOOP has not had income sufficient to meet cash needs, and not be able to charge tariffs which result from any regulatory allowed rate of return on a rate base. Even to meet its cash requirements, LOOP has had to request large cash infusions from its shareholders. Clearly this is a business which does not need to be regulated.

SURPLANTING THE NATURAL REGULATION OF THE MARKETPLACE WITH FEDERAL REGULATION IS COSTLY TO THE GOVERNMENT, CONSUMERS, AND INDUSTRY

The costs of rate regulation of deepwater oil ports are threefold—(1) the out-of-pocket costs of the government and the industry for rate proceedings (2) the impact of rate regulation discouraging needed investment, and (3) the impact of rate regulation on the creativeness of companies to meet significant unregulated competition. Each of these costs are inevitably passed to the consumer in the form of higher taxes or prices.

The dollar costs of FERC regulation are significant. As an example, since the transfer in October, 1977, of rate regulation responsibilities to the FERC from the ICC, the FERC's efforts have been focused on two major oil transportation rate cases—the Williams Pipe Line and Trans-Alaska Pipeline System. During the past four years, substantial sums have been spent both by the Government and industry for those two cases. FERC's budget for oil pipeline regulation has risen from $5.1 million in 1979, to $5.6 million in 1980, to $6.0 million in 1981, and to $8.0 million for 1982. From 1979 to 1982, this represents a 56 percent increase and a 33 percent increase from 1981 to 1982. Unfortunately, these are only the costs of the FERC, and do not include the costs of other branches of the Department of Energy, the Department of Justice, the Federal Trade Commission and the Department of Transportation which often intervene in rate proceedings. Industry's costs are equally substantial.

LOOP has already spent approximately $2 million due to regulation. These moneys have been spent on regulatory accounting advice from a public accounting firm, outside legal counsel, experts to support LOOP's positions, as well as in-house personnel. If rate regulation is not removed from deepwater oil ports, those regulatory costs will rise dramatically, as the FERC may yet likely initiate a prolonged hearing into how to regulate deepwater oil ports, which they have never had to regulate before. A prolonged rate hearing could cost LOOP and the government $10 million, an amount which would eventually be reflected in higher taxes and prices to the consumer. This would be a needless burden on the consumer since, in the final analysis, LOOP's tariff is restrained to the levels of unregulated tanker competition for the foreseeable future—a tariff level which does not meet cash operating expenses, and does not begin to provide an adequate return.

Rate regulation can also increase costs by discouraging needed investment, and, therefore, forcing the utilization of less efficient transportation modes. The uncertainty of future rate regulation was partly responsible for the failure of Seadock, a canceled Texas deepwater oil port project, to attract investors.

Rate regulation of an industry faced with significant unregulated competition serves only to stifle the creativeness of the firm to respond to that competition. Rates of LOOP's competition—tankers—respond instantly to the forces of supply and demand and therefore experience wide gyrations during the course of a year (frequently tanker rates in one month of a year will be more than double rates in

other months of that year). Thirty days filing requirements, and required justification of rate filings are burdensome and costly as well as inefficient in setting rate levels which follow competition.

EXXON CO., U.S.A.,
Houston, Tex., October 18, 1982.

Hon. BOB PACKWOOD,
Committee on Commerce, Science, and Transportation,
U.S. Senate, Washington, D.C.

DEAR SENATOR PACKWOOD: At the September 29, 1982, hearing on oil pipeline rate deregulation in the Senate Committee on Commerce, Science, and Transportation at which Senator Stevens presided, a number of unfounded allegations were raised by representatives of the Independent Gasoline Marketers Council and the Independent Refiners Association of America. These allegations generally charge that major refiners, who are also pipeline owner/shippers, have engaged in predatory marketing practices employing pipeline and production profits to subsidize downstream operations thus enabling them to compete unfairly with independent refiners and marketers.

You recognize, of course, that these allegations are not new and they have been effectively rebutted many times in the past. However, I would like to reiterate a few key points.

First, Exxon does not engage in predatory pricing.

Moreover, existing antitrust laws provide adequate legal remedies for anyone claiming injury by predatory pricing. Accordingly, additional legislation is not needed.

Finally, cross-subsidization or the use of profits from oil and gas production to support refining and marketing operations makes no sense. Exxon needs all of the profits from its production activities for reinvestment into the search for and production of oil and gas. It would not be a sound business practice to divert those profits to subsidize marketing or any other operations.

More detailed analysis and rebuttal of these allegations can be found in many publicly available documents. Some of these are listed for your ready reference:

U.S. DOE Office of Competition Report (DOE/PE 0026) dated January 1981—A Study of Refiner Subsidization

API Research Study No. 026 (April 1982) Economic Theory and Evidence on Cross-Subsidization of Retail Gasoline Operations

API Research Study No. 019 (January 1981) Accounting Rates of Return as Evidence of Cross-Functional Subsidization: The Relation of Petroleum Production Asset Vintage and Accounting Rates of Return.

A number of charges were also made regarding costs and tariffs for the Trans Alaska Pipeline System. The pipeline allegations have been effectively addresed in the testimony of Mr. Dean B. Taylor, president of the Association of Oil Pipe Lines (AOPL), and the supporting statements of Professor Edward J. Mitchell of the University of Michigan and Mr. Richard J. Barber, a Washington, D.C. transportation consultant. Moreover, Exxon Pipeline Company, in response to certain specific TAPS allegations, has also submitted comments to this committee.

It is widely recognized that the post-decontrol retail gasoline marketplace is extremely competitive. The allegations raised in the hearings are voiced by groups who, although no doubt sincere in their concern over their members' economic problems, fail to recognize that what they are calling predatory practices are in reality legitimate business decisions designed to permit supplying companies to remain both competitive and economically viable in the current highly competitive gasoline market. Robert D. Tollison, Chief Economist for the Federal Trade Commission, in a Bureau of National Affairs interview published by BNA on September 30, said "More often than not, I would guess that what is called predatory pricing is normal competitive behavior . . ." More importantly, the consumer is the chief beneficiary of this competition. The proponents of this kind of legislation are attempting to insulate themselves from the rigors and challenges of the free market. However, history has shown that government intervention in the marketplace has not been in the long term best interests of either competitors or consumers.

Very truly yours,

W. T. SLICK, Jr.,
Senior Vice President.

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